

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The Library of Congress

In the Matter of

DETERMINATION OF RATES AND
TERMS FOR MAKING AND
DISTRIBUTING PHONORECORDS
(PHONORECORDS IV)

Docket No. 21-CRB-0001-PR (2023–2027)

WRITTEN DIRECT STATEMENT OF APPLE INC.
(PUBLIC VERSION)

Volume 2: Witness Statement & Expert Report

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TESTIMONY OF ELENA SEGAL

1. My name is Elena Segal. I am the Global Senior Director of Music Publishing at Apple UK Limited, an Apple Inc. (“Apple”) affiliate, a position I have held for 2 years. Prior to that, I was the Global Director of Music Publishing for approximately one and a half years. Before that, I was the Director, iTunes International in the Legal Department ultimately with responsibility across music, video, books and App Store outside the United States. That included extensive experience handling complex music publishing matters for iTunes and subsequently the licensing of the rights in musical compositions for the launch of Apple Music. In total, I have been employed by Apple, or an Apple affiliate, for nearly 16 years.

2. As Global Senior Director of Music Publishing I am responsible for commercial, operational, strategic and creative aspects of Apple’s relationships with music publishers and songwriters, including the negotiation of agreements related to the use of musical compositions on Apple Music, and Apple’s royalty payments related to Apple Music. Through my role as Global Senior Director of Music Publishing, I am very familiar with the Apple Music interactive streaming service and the costs associated with this service. I also am very familiar with Apple’s

negotiations with music publishers, performing rights organizations (“PROs”), and labels for the use of their copyrighted works on Apple Music.

3. Prior to joining Apple, I was an attorney in the Litigation Department at Mitchell Silberberg & Knupp LLP in Los Angeles. In that role I had a significant focus on copyright infringement matters in music and movies, including the secondary copyright infringement litigation against Grokster and KaZaA as well as the then-novel “John Doe” filesharing litigation against thousands of individuals throughout the United States, on behalf of the Recording Industry Association of America.

4. I submit this testimony in support of Apple’s direct case in the above-captioned proceeding.

5. Section I of this statement briefly provides background regarding Apple Music. Section II discusses the benefits of Apple Music to copyright owners and consumers. These benefits include increased revenue to music publishers and songwriters, enhanced music discovery tools that allow artists to reach new audiences, and improved listening experiences for consumers. Section III explains the costs and risks to Apple of offering Apple Music, including Apple’s substantial royalty costs from operating the service. Section IV explains how labels have been able to extract high royalties and other commitments from Apple due to their market power. Section V explains Apple’s rate proposal. Finally, Section VI explains how Apple’s proposal is consistent with the agreements Apple negotiated with rights holders, including music publishers, for the rights necessary to operate Apple Music.

I. APPLE MUSIC BACKGROUND

6. Apple has played a significant role in the digital music market since at least April 2003, when it launched the iTunes Store, a revolutionary, online store that made lawfully licensed music available for consumers to download. By offering a seamless, intuitive, easy-to-use product, Apple was able to provide an attractive alternative to consumers who might otherwise fulfill their music needs on infringing digital platforms, like Napster. Since then, Apple has been at the forefront of the digital music market. Its most recent pure music offering is Apple Music, an interactive streaming and limited download service that allows subscribers to listen to more than 75 million songs on-demand. This catalog includes a wide range of music, from Top 40 to international hits to classical music. Users can search music, create playlists, save their favorite songs in the music “Library,” and, as described more below, listen to curated content from Apple Music. As with non-interactive streaming, subscribers also can listen to songs inspired by a particular song or artists, but with the added benefit of freely skipping songs they do not like. In addition, Apple Music includes other features, such as music videos and time-synced lyrics, that help attract consumers to the product and away from “free” services.

7. Like most premium music offerings, Apple Music is available via subscription. The Apple Music standard Individual plan costs \$9.99 per month and provides one person with access to Apple Music. To help make music accessible to a greater number of consumers, Apple also offers a Student Plan to verified college students for \$4.99 per month, and a Family Plan for up to six family members for \$14.99 per month. In addition, Apple offers Apple Music in bundles with other services and/or hardware, such as in its Apple One service bundle.

8. Apple Music subscribers can access the service from a variety of devices, including devices that are not manufactured by Apple. The key requirement is simply that the

consumer has an Internet or mobile connection. Thus, while consumers can certainly access Apple Music through Apple devices, such as the iPhone, iPad, Apple Watch, HomePod, AppleTV, and Mac computers, they can also access it through devices using the Android operating system, PCs, and other devices with a Web browser, and various third-party devices, such as the Sonos sound system, Amazon Echo speakers, and Samsung TVs. On compatible devices, subscribers can download songs for offline listening throughout the duration of their membership. A true and correct copy of an excerpt from Apple's website describing various features of the product is available at **APL-01**.

II. COPYRIGHT OWNERS AND CONSUMERS BENEFIT SUBSTANTIALLY FROM APPLE MUSIC

9. As described below, Apple Music has been a boon for copyright owners, both financially and because of the access it provides to a global audience. Indeed, while in the past era of physical distribution a song's chance of success may have been brokered by intensely local relationships among various links in a long distribution and promotion chain, the sophisticated technological infrastructure developed by streaming services means that now every song can be seamlessly made available to a global audience in 167 countries with essentially the click of a button. Consumers have also benefitted from interactive streaming and the new methods of music listening and discovery that it provides.

A. Apple Music Helps Increase Music Revenue for Publishers and Songwriters

10. One of Apple Music's greatest benefits to music publishers and songwriters has been financial.

11. Publishers and songwriters receive both mechanical and performance royalties from interactive streaming. As shown in Apple's royalty and subscribership data, a true and

[illegible]

12. While Apple's creative, attractive offering has increased in popularity due to Apple's efforts to market the service and create appealing, new, features, it is important to note that the overall music market has grown as well and that Apple's growth does not seem to be merely at the expense of royalties from other music distribution services. Rather, several sources have reported an overall increase in music revenue in the past few years, driven largely by streaming. For example, according to the Record Industry Association of America, U.S. music industry revenue grew 9.2% from 2019 to 2020 and 27% in the first half of 2021, compared to the first half of 2020. **APL-003-APL-005.**

13. The PRO ASCAP, reported an increase in performance royalties every year since 2015, with royalties growing by \$53 million from 2019 to 2020. A true and correct copy of this

report is attached as **APL-006**. U.S. growth was driven by gains of “28% in audio streaming revenue.”

14. The Digital Media Association Annual Music Report by MIDIA similarly found that streaming revenue growth of \$1.7 billion in 2019 was “15 times greater than physical revenue decline” that year. A true and correct copy of this report is attached as **APL-007**.

15. Apple’s own data also shows **RESTRICTED**
[REDACTED] the launch of
Apple Music.

16. In other words, interactive streaming is not just replacing other royalty sources. It is increasing the total pie. In fact, the growth in royalties for rights holders has been so significant that publisher catalogs have been reported as one of the hottest investments for private equity firms. A true and correct copy of one example of such reporting is attached hereto as **APL-008**.

B. Through Its Focus on a Premium Music Service, Coupled With Various Tiers, Bundles, and Trials, Apple Helps Attract A Variety of Consumers to Paid Music Streaming

17. Apple has achieved this significant, industry-wide growth by providing consumers with a premium tier, full-catalog, \$9.99 service coupled with various discounts and trial periods to attract low willingness-to-pay consumers and/or funnel new consumers to a premium paid streaming service.

18. As discussed more below (Section III), Apple has invested heavily in creating an appealing, easy-to-use, premium music streaming service with numerous music discovery tools,

playlists, audio enhancements, and other technological innovations to attract and retain subscribers to a premium service (which, Apple understands, is the most lucrative service for copyright owners). Through extensive marketing, Apple has grown subscribership to Apple Music and helped educate consumers on the value of a premium paid music subscription. As a result, the vast majority of subscribers to Apple Music are individual plan subscribers paying \$9.99 for Apple's service. A true and correct copy of Apple's subscribership data is attached hereto as **APL-002**.

19. To help convert consumers to Apple Music and introduce premium subscription streaming to consumers who might not yet realize the benefits of such a service, Apple offers certain discounts and trial periods to consumers. These discounts and trials benefit both the music industry and consumers, by providing to consumers who might not otherwise pay for music a legitimate and creatively-run paid music streaming platform and proving the value proposition of a premium plan.

20. One way Apple does this is with family and student plans. As noted by the Copyright Royalty Judges and the D.C. Circuit Court in connection with the *Phonorecords III* proceeding, evidence in that proceeding showed that student and family plans are sensibly aimed at monetizing segments of the population with a low willingness or ability to pay. This continues to be true today.

21. As mentioned above, Apple Music family plans cost 1.5 times the rate of an individual subscription and provide music to up to six users. These plans help increase revenue and royalties, as it is very unlikely that a family would purchase individual subscriptions for each family member at full price, a cost of nearly \$40 per month for a family of four. Instead, without

a family subscription option, it is much more likely that the family members would simply try to share one plan or find other “free” options. Family plans also entrench the idea of listening to music via interactive streaming in younger family members, so they are more likely to pay for music and join a streaming service when they get older. Family plan subscribers also

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22. Student plans increase revenue by attracting consumers who cannot, or would not, pay a full subscription price for music and drawing them into the paid subscription ecosystem, so they convert to full-paying customers after graduation. Student plans cost half as much as individual plans. Because students often do not work and/or have smaller budgets than people who are in the work force full time, this lower price tier allows students to subscribe to an interactive streaming service rather than resort to piracy or other forms of music consumption that do not pay mechanical royalties, or pay lower mechanical royalties. (In fact, given how streaming has saturated the U.S. market, with 125 million U.S. consumers over age 13 using paid streaming services as of Q2 2019, according to public reports, there is little doubt interactive streaming has reduced piracy. A true and correct copy of an article regarding the number of paid streaming consumers is attached hereto as **APL-009**. Student plans also habituate students to paying for music, with the goal that they will then pay for interactive streaming after they graduate, to the benefit of both copyright owners and services. (In fact, with Apple Music, students automatically convert to individual subscribers unless they re-verify themselves as students or cancel.)

23. Bundles also help attract low willingness-to-pay consumers and new consumers. In a bundle, Apple Music is packaged with other products or services for a reduced price as compared to the standalone price for the various components of the bundle.

24. Apple's most prominent bundle is the service bundle, Apple One, which combines Apple Music with various other services, as I describe below. The Apple One subscriptions are available in three tiers. First, the "Individual" Apple One plan, which costs \$14.95 per month and includes Apple Music, Apple TV+, Apple Arcade, and 50GB of iCloud storage. Second, the "Family" Apple One plan, which costs \$19.95 per month and includes Apple Music, Apple TV+, Apple Arcade, and 200GB of iCloud storage for up to six people. Finally, the "Premier" Apple One plan, which costs \$29.95 per month and includes Apple Music, Apple TV+, Apple Arcade, 2TB of iCloud storage, Apple News+, and Apple Fitness+ for up to six people. A true and correct copy of an excerpt from Apple's website explaining the Apple One bundle is attached at **APL-010**.

25. To demonstrate how the Apple One bundle works, I will focus on the individual plan. The prices for the components of the Individual Plan bundle are as follows: \$9.99 for Apple Music, \$4.99 for Apple TV+, \$4.99 for Apple Arcade, and \$0.99 for 50GB of storage. Together this equals \$20.96. A consumer interested in Apple Arcade and Apple TV+ may not be willing to pay full price for Apple Music on top of these other services. With the bundle, however, rather than paying \$9.99 on top of the full cost of Apple Arcade, Apple TV+, and iCloud+, the consumer can get Apple Music for just an extra \$3.98. Put another way, the subscriber can have all four parts of the bundle at the discounted price of 71% (\$14.95/\$20.96). As a result, someone who would not pay for interactive music streaming is now a streaming customer.¹

¹ Of course, some bundle subscribers may have a low willingness-to-pay for other aspects of the bundle, which is why Apple does not propose the *Phonorecords II* practice of valuing a bundle as whatever remains after the value of the other components of the bundle are subtracted from the bundle price. Instead, it proposes a

26. In addition to these service bundles, hardware bundles, under which consumers receive an Apple Music subscription in connection with the purchase of hardware, can similarly help grow the consumer base for interactive streaming services.

27. Trial plans also help drive consumers to pay for music, and are an accepted and primary customer acquisition tool across the subscription marketplace. Given the many options, including piracy, for listening to music, consumers can be hesitant to sign-up for a \$9.99 per month music service. To help draw consumers away from low, or zero, royalty music options, Apple offers Apple Music for free for the first three months. Consumers are eligible for this three-month trial once every three years. The objective is that once people enjoy the easy access to music, and the creative playlists, high quality audio, intuitive user interface, and other benefits that Apple provides to its subscribers, which are discussed below, they will be enticed to continue to subscribe to Apple Music as a paying subscriber long term.

28. Finally, interactive streaming services might come up with other options to entice consumers to sign up for a subscription interactive streaming offering. For example, lower-priced plans with limited functionality as compared to premium services may be attractive to consumers who are unwilling to pay \$9.99 for music.

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29. The bottom line is that merely offering the same individual monthly subscription rate with no discounts or variations is not in the best interest of services, copyright owners, or

balanced position, discussed more below, where royalties for service bundles are reduced proportionally based on the value of the interactive streaming service relative to the value of the other components of the bundle.

consumers, who might have different needs and desires. Rather, it is good for the system to have market segmentation and a broad array of options to help funnel consumers to premium subscription services. The segmentation and funneling tools Apple uses are pro-competition and pro-growth, as they help drive consumers to paid streaming to the benefit of copyright owners. The royalty structure, thus, should facilitate these practices, provided, of course, that the copyright owners are appropriately compensated and that all offerings treat music as something having value.

30. Apple's premium service coupled with various discounts, trial plans, and bundles, has resulted in enormous growth in subscribership. In fact, as shown in **APL-002**, Apple Music has grown from **RESTRICTED** in January 2017² to **RESTRICTED** in June 2021 (excluding, for all numbers, subscribers in the first month of a trial, for which there are no royalties under the current regulations), a roughly **RESTRICTED** increase in subscribers in just four and a half years, not even counting bundle subscribers—**RESTRICTED**. Including bundles, the service has grown almost **RESTRICTED** from January 2017 to June 2021.

31. Notably, **RESTRICTED**. For example, the chart below summarizes data from **APL-002**. It shows that from Q1 2017 to Q2 2020, **RESTRICTED**.

² Apple Music launched in mid-2015, so this data does not include the initial ramp-up period for the service.

	Q1 2017	Q4 2020	Growth
Total plans	RESTRICTED		
Royalties	RESTRICTED		

C. Apple Music Helps Expose Artists and Songwriters to New Audiences and Increase Engagement with Music

32. Apple Music also benefits consumers and the music industry by providing new avenues for music promotion and discovery.

33. It is important to note that Apple Music is not just a mechanism to find and play a song. To attract users to Apple Music and keep them interested and engaged, Apple offers subscribers several innovative features that help connect subscribers with new (or forgotten) songs and artists. In turn, these features help artists and songwriters connect with new audiences and gain exposure. Apple creates these features at its own expense for the purpose of encouraging people to sign up for Apple Music, use Apple Music more, listen to music more, and discover more new music. If it did not invest in these added features, consumers would not pay premium rates and would simply switch to less expensive offerings. Put another way, given the many free music services available to consumers in the United States (*e.g.*, YouTube, Amazon Free, Amazon Prime, Spotify Free), Apple could not grow and retain customers if not for its added-value features. But because Apple offers this added value to consumers—beyond mere access to music—consumers are willing to pay premium service prices, to the benefit of the publishers and songwriters who receive royalties based on revenue from Apple Music.

34. One such feature is playlists. Apple offers subscribers several personalized weekly playlists, including the “New Music Mix,” which contains new music the user may like

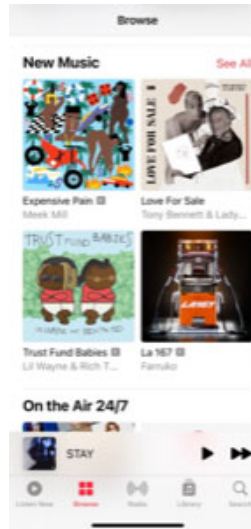
based on usage history, the “Get Up! Mix,” a personalized mix of upbeat music, and the “Chill Mix,” a customized mix of relaxing songs.

35. Apple Music also creates editorially curated playlists that are available to all subscribers. For example, it has an extensive list of “Inspired by” playlists, which are collections of songs by a variety of performers all of whom were inspired by the same artist. These playlists are a great way for subscribers who like one artist to find similar performers and songwriters.

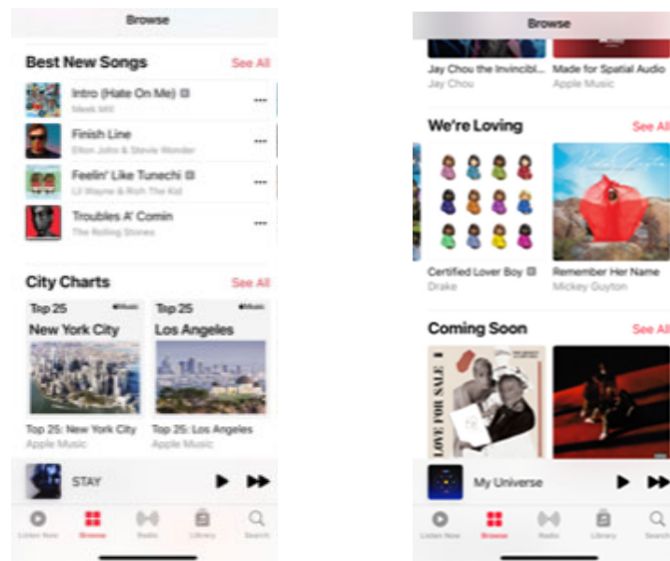
36. The “Up Next” playlist is another important tool for introducing performers to subscribers, as it features music by new and emerging artists. Similarly, “New Music Daily” introduces the latest music to subscribers every day.

37. Apple also creates playlists inspired by genre (e.g., “R&B Now, “Indie Anthems,” and “Today’s Country”), mood or activity (e.g., “Pure Workout” for fitness, “Tearjerkers” for emotional pop tunes, and “Party Starters” for party tunes), and era (e.g., “90’s Hits Essentials,” “80s Dance Party Essentials,” “Hip-Hop/R&B Throwback”), all of which help subscribers find, or rediscover, new songs. Apple creates these, and all, Apple Music playlists, through its own expense, effort, and inventiveness, with the hope of encouraging people to pay for Apple Music to gain access to these creative, often personalized, features.

38. In addition to playlists, the Browse page in Apple Music also encourages new music discovery. For example, the Browse page includes an entire section dedicated to “New Music.”

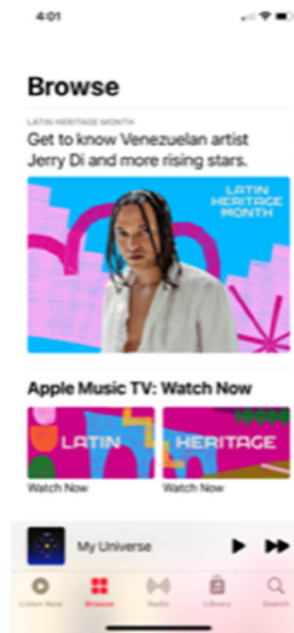


39. It also includes a list of “Best New Songs,” albums Apple is “Loving,” and lists of albums that are “Coming Soon” to help create enthusiasm for future releases.



40. Subscribers can also add upcoming releases to their music libraries, so that they do not have to re-search for these upcoming albums once they are released. Instead, they are already saved with the subscriber’s other saved music.

41. In addition, the Browse page uses themes to highlight different artists or types of music. For example, during Latin American Heritage Month, the Browse page featured Latin American music and artists.



42. Apple Music also curates Category pages that group music in easy to find ways, such as “Pop,” “Country,” “African,” “K-Pop,” or “Telugu.” These Categories have the same features as the Browse page, but tailored to the specific music style. Categories are particularly useful for finding and discovering non-English language music.

43. Apple Music also offers unique content features that further promote music discovery and consumption. For example, Apple creates a weekly video series, called “This Week on Apple Music,” that recaps the five biggest stories on Apple Music each week. In addition, Apple Music features three radio stations with exclusive, original programming, i.e., “Apple Music 1,” “Apple Music Country,” and “Apple Music Hits,” all of which include linear,

non-interactive programming created in collaboration with popular pop culture influencers and artists.

44. Through these various tools, Apple helps artists and songwriters reach and connect with new audiences that they could not reach previously. In fact, a recent report from DiMA, in conjunction with MusicWatch and A2IM, found that streaming services are the “most influential” source to expand consumers’ musical experiences. A true and correct copy of this report is attached hereto as **APL-011**.

45. These various features also promote engagement with and enthusiasm for music, which is particularly important these days, as music competes more than ever with other forms of entertainment, like television, podcasts, and popular social media options, like TikTok.

D. Apple Music’s Technical Innovations Improve Consumer Listening Experiences

46. In addition to its investments in playlists, personalized recommendations, and music promotion, Apple also has introduced several technological innovations to improve consumers’ listening experiences and promote greater growth in the industry. Like the music discovery and promotional tools described above, Apple also develops these technological features at its own expense to encourage consumers to pay for its service rather than lower cost, and, thus, lower royalty producing, music offerings.

47. Just this year, Apple Music introduced Spatial Audio to create a more immersive listening experience for subscribers. Spatial Audio allows Apple Music subscribers to experience a new audio format that simulates surround sound. Spatial Audio supports Dolby Atmos, which further improves listener experience by allowing music to be mixed so the sound

appears to come from all around and above the listener, surrounding listeners in a new way. Apple Music subscribers can enjoy thousands of songs in Spatial Audio from some of the world's biggest artists across all genres, including hip-hop, country, Latin, pop, and classical. A true and correct copy of Apple's press release announcing the new feature is attached as **APL-012**.

48. Consistent with the music discovery function of Apple Music, Apple has also developed a way to integrate Apple Music with Apple's innovative and popular Shazam feature. Shazam is a music identification service that Apple acquired in 2018 that identifies songs playing in the real world, such as in a restaurant or bar or in the car. Apple took this technology one step further in order to encourage consumers to discover, sign up for, and use Apple Music. Now, when consumers use Shazam to identify a song, Shazam will direct them to Apple Music if they would like to listen to the full song. Further, when an Apple Music subscriber uses Shazam, the song playing in the world and identified by Shazam can be automatically added to an Apple Music playlist called "My Shazam Tracks." The Shazam integration also allows subscribers using Shazam to instantly add the new song to a personalized playlist or view the album on which the song appears with a single click.

49. The Shazam technology also allows Apple to quickly and accurately identify the songs used in remixed or mashed-up songs, to ensure the appropriate publishers and PROs receive the proper royalty payment. Apple, thus, integrated the technology to benefit not only consumers, but music publishers and songwriters as well. A true and correct copy of a press release detailing this new remix/mashup feature of Shazam is attached hereto as **APL-013**.

50. In addition, Apple developed a Siri integration for Shazam, through which consumers can use Apple’s voice command feature, “Siri,” to identify a song playing in the background and then link to Apple Music to hear the song or see the album on which it appears. Apple has also designed other features using Siri to promote music discovery and engagement. For example, Siri will play music in response to a wide variety of requests. Consumers can also use Siri voice commands to ask what song is playing now, which is especially helpful when listening to music on a platform with no user interface, such as a HomePod.

51. Apple has also developed technology focused on user engagement and sharing. For example, Apple’s new SharePlay technology allows Apple Music subscribers to listen to songs together in Apple Music while on a FaceTime call, making it easier than ever to recreate the experience of sitting in a room listening to music together. A true and correct copy of a press release concerning this new technology is attached. **APL-014**. Lyric sharing is another engagement feature that allows Apple Music subscribers to share snippets of lyrics plus audio with one another, or share a snippet of lyrics on social media. A true and correct copy of an excerpt from Apple’s website regarding this feature is attached as **APL-015**. When non-subscribers attempt to access these features, they are presented with an upsell to subscribe, offering an additional customer acquisition channel powered by users’ social connections.

52. Through these various features, Apple attracts more consumers to its paid premium interactive streaming service and offers engaging listener experiences to retain customers and fuel recurring royalty streams. This benefits copyright owners.

III. RISKS AND COSTS TO OFFERING APPLE MUSIC

53. Of course, offering a service like Apple Music comes with significant risk and investment, which Apple must make without knowing whether its service, or any feature within the service, will succeed.

54. Operating an interactive streaming service requires substantial investment in infrastructure and development, including in servers, coding, user interfaces, and employees. Further, each innovation—including those described above, such as Shazam integration and lyric sharing—requires intensive engineering work, and sometimes substantial external investments, such as in the acquisition of Shazam. Apple must invest **RESTRICTED** of hours in developing, integrating, and marketing these products with no guarantee that consumers will like them or that they will help attract more users to Apple Music. Apple also must invest in marketing and promotion for Apple Music, research and development, and support tools to help consumers understand how to use Apple Music and troubleshoot any problems. In addition, Apple incurs significant costs related to marketing music, which benefits the songwriters and publishers of the music being promoted at no additional cost to them.

55. While these investments are substantial, the **RESTRICTED**
RESTRICTED It cannot be over-emphasized that Apple currently pays approximately **RESTRICTED** of its revenue from Apple Music to labels and publishers/PROs (who, in turn, pay songwriters) for plays of music alone. As of the second quarter of 2021, approximately **RESTRICTED** of revenue goes to labels.³ As for publishers and PROs, Apple has paid approximately **RESTRICTED**

³ For example, as shown in data produced in this proceeding, in June 2021, Apple Music earned approximately **RESTRICTED** in revenue and sound recording costs were **RESTRICTED**

of revenue to publishers and PROs in 2021 for music streams alone.⁴ Specifically, as shown in the data in **APL-002**, summarized below, Apple’s effective rate for 2021 is as follows:

Quarter	Revenue	Mechanical Royalties	Performance Royalties	Effective Rate
2021Q1	RESTRICTED			
2021Q2	RESTRICTED			

56. A significant point about these effective rates is that they are based on Apple paying the interim headline rate under *Phono II*, 10.5%, but are **RESTRICTED** that headline rate. As is further discussed below, a goal of this proceeding should be to create a rate structure that does not push effective rates above headline rates **RESTRICTED** but instead provide the certainty that services need to effectively plan for royalty costs in developing their business.

57. On top of the music streaming royalties, Apple pays labels and publishers/PROs even more for added features not covered by the Section 115 license, such as lyrics and music videos. Therefore, copyright owners collectively receive **RESTRICTED** of the revenue from Apple Music.

58. Apple also must pay other costs, such as overhead for an organization of **RESTRICTED** people⁵ and the infrastructure, marketing, and development costs described above.

59. There is a popular misconception that **RESTRICTED** But as this discussions shows, that is just not the case. Rather, **RESTRICTED**

⁴ Singer-songwriters would receive both label and publisher royalties.

⁵ This number includes full-time personnel and full-time equivalents dedicated to working on Apple Music, and excludes personnel in corporate G&A functions who work across Apple’s content services, and so understates the people resources Apple devotes to music.

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Apple understands from public sources that labels have improved profit margins since the launch of Apple Music.⁷

60. While Apple thinks Apple Music is a fantastic service that has benefitted both copyright owners and consumers tremendously, continued increases in effective royalty rates, and/or unpredictability in what royalties might apply from month-to-month or quarter-to-quarter,

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61. The enactment of the Music Modernization Act (“MMA”) has also RESTRICTED Under the MMA, digital music providers, like Apple Music, must pay an assessment to fund the administration of the Mechanical Licensing Collective, on top of the royalties payable. Apple’s assessment is approximately RESTRICTED previous administrative costs for paying mechanical royalties.

62. The current interim rate structure further increases the challenges of operating Apple Music because the total royalties owed to publishers and songwriters for plays of songs is not predictable. Beginning in January 2021, Apple has paid mechanical royalties, on an interim basis, pursuant to the *Phonorecords II* statutory rate. Apple understands that the purpose of this rate structure was to fix a headline rate of 10.5% of revenue for mechanical plus performance

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⁷ For example, Billboard reports that UMG grew profit margins by more than two percentage points from 2019 to 2020. APL-017. It also reported that WMG’s profit margin was climbing in 2021 to 12.1% of revenue, largely due to streaming revenue growth. APL-018. Rolling Stone reports on how catalog music, which thrives on streaming services, offers better profit margins for publishers. APL-207.

royalties, and then incorporate several backstops, such as total content cost (or “TCC,” which calculates publisher royalties for interactive streaming as a percentage of the royalties paid to labels) and per subscriber mechanical minima, to protect copyright owners against revenue deferral or loss leader strategies. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] mere decoy while other prongs of the *Phonorecords II* rate take over. There are several reasons for this.

63. First, as explained above, three-month trial periods help motivate people to join Apple Music. But under the current rate, Apple must pay the full mechanical royalty minimum of \$0.50 per subscriber for months two and three of its three-month trial period, even though it is not earning any revenue from consumers during these two months. Notably, as discussed more below, in real-world negotiations, publishers, performing rights organizations (“PROs”), and labels [REDACTED]

Requiring full payments in months two and three is, thus, [REDACTED] creates a disincentive to Apple to offering trials to consumers to help convert them to paying customers.

64. Second, Apple uses other discounts to help attract new customers and win back old ones. For example, it has used “three months for the price of one” discounts to attract lapsed customers. It also has agreements [REDACTED]

[REDACTED]

[REDACTED]

65. Third, PROs that are not subject to the consent decrees, like SESAC and GMR,

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, even though they own only a tiny fraction of the works in Apple Music's catalog. This has led to performance royalties in excess of ^{RESTRI} of revenue. For example, as shown by the data in APL-002, RESTRICTED

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of revenue. To illustrate why this happens, take the second quarter of 2021. Apple Music earned RESTRICTED in revenue,

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Its performance royalties to publishers and songwriters were RESTRICTED Therefore, using the headline rate, one would expect mechanical royalties from Q2

2021 to be RESTRICTED Instead, Apple paid RESTRICTED in mechanical royalties because other prongs of the *Phonorecords II* royalty calculation kicked in.

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. It is very difficult to operate a business when

RESTRICTED

66. While the issues just described already create challenges for Apple Music, if

Apple had to pay mechanical royalties based on a calculation that included a TCC rate of 26.2%—like that proposed in the *Phonorecords III* remand—the royalties paid to publishers and

⁸ APL-002 RESTRICTED)

⁹ APL-002 RESTRICTED

songwriters could [REDACTED] of revenue, creating greater uncertainty and further cutting into the portion of revenue available to Apple to pay non-royalty costs.

67. For example, based on Apple's current payments of [REDACTED], a 26.2% TCC rate would result in publishers and songwriters receiving at least [REDACTED] of revenue ([REDACTED]) in 2021. Further, TCC, which I understand is intended as a backstop in the rate calculation to protect copyright owners against deferral of revenue and free-to-the-user services for which revenue does not suffice as a measure, [REDACTED]. Given the power labels have to [REDACTED], this is a significant concern, because, as discussed more below, [REDACTED]

68. In short, operating an interactive streaming service is expensive and margins are [REDACTED] due, largely, to royalty costs. Any further [REDACTED]. Therefore, establishing an all-in publisher royalty rate that (a) does not exceed the effective rates that Apple has customarily paid, (b) supports discounts and operating tiers like Apple offers to increase total revenue for everyone, (c) provides a level playing field for services across different business models, and (d) provides more predictability as to what effective royalties will be is very important to Apple from a business perspective.

IV. LABELS HAVE SUBSTANTIAL MARKET POWER BECAUSE EVERY MAJOR LABEL IS A MUST HAVE FOR A PREMIUM SERVICE

69. As just described, label royalties represent [REDACTED]. Labels can extract [REDACTED] from services due to their market power. This principle is important to understanding why labels

have not and likely will not in the future

RESTRICTED

why tying publishing royalties to label royalties via a TCC calculation is both economically irrational and dangerous to the health of the music economy.

70. The big three labels (Sony Music Entertainment or “SME”, Warner Music Group or “WMG”, and Universal Music Group or “UMG”) or “Majors” have extraordinary market power because every Major is a “must have” for a premium music service. The three Majors own the vast majority of sound recordings that consumers want to hear. In fact, RESTRICTED of plays on Apple Music are of a catalog owned by the Majors.¹⁰ Therefore, a premium service—which is the most profitable service for rights holders—cannot reasonably compete in the interactive streaming market without the full catalog from each of the Majors. Consumers would simply unsubscribe and switch to a different service if they routinely searched for popular songs on Apple Music and could not find them. Alternatively, Apple would have to lower its consumer price relative to services with music from all the Majors. Meanwhile, streaming music deals are structured so that the streaming service must pay RESTRICTED

. This obviously would make it difficult, if not impossible, for a DSP to compete without the catalog of all three Majors.

71. Nor could Apple use steering (i.e., pushing consumer listening to one label over another) to reduce label rates and improve its market position. As an initial matter, for the integrity of Apple’s system and its recommendations, Apple does not engage in steering. Apple believes strongly in being fair to creators and offering customers the best possible experience, so

¹⁰ During the month of July 2021.

neither its personalization features nor its editorial choices are intended to favor one rights holder over another. But even setting that aside, I believe that negotiating **RESTRICTED**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] which as previously described is not tenable for a premium paid subscription service to do.

72. Given their market power, the Majors have been able to negotiate **RESTRICTED**

[REDACTED] To the extent they have **RESTRICTED** [REDACTED]. When Apple first launched Apple

Music it paid the Majors **RESTRICTED** of revenue, **RESTRICTED**, in order to obtain additional rights, **RESTRICTED**

[REDACTED].¹¹ **APL-067–APL-069**. Upon Apple’s first renewal with the Majors in **RESTRICTED**

[REDACTED] **APL-070–APL-072**. **RESTRICTED**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹¹ Because Apple believes royalty rates should not be a reason an artist chooses to sign with a Major rather than an independent label, Apple paid independent labels the same rate.

73. Upon the second renewal in 2019, RESTRICTED

[REDACTED]

[REDACTED] APL-

073. Apple had to make RESTRICTED

[REDACTED]

[REDACTED] APL-074. RESTRICTED

[REDACTED]

[REDACTED] APL-075. Apple understands that the Majors RESTRICTED

[REDACTED]

[REDACTED] which inherently disfavors smaller services and may prove unsustainable even for the largest services.

74. In Apple's RESTRICTED

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] APL-046; APL-076; APL-077. Specifically, RESTRICTED

[REDACTED]

[REDACTED] APL-046; APL-076; APL-077. If Apple RESTRICTED

[REDACTED] In other words, RESTRICTED

[REDACTED]

[REDACTED]

[REDACTED]

above, once all aspects of the agreements are considered, label royalties are **RESTRICTED**
[REDACTED] of revenue **RESTRICTED**

75. These negotiations show that the Majors are **RESTRICTED**

[REDACTED]

[REDACTED] The implication, and concern for services, is that when

RESTRICTED

[REDACTED]

76. Significantly, never once during these negotiations did the Majors **RESTRICTED**

[REDACTED]

[REDACTED] Instead, the Majors seem focused exclusively **RESTRICTED**

[REDACTED]

77. It also is not possible to quickly change royalty rates with Majors in the event
publishing royalties increase. The agreements with the Majors reflect a constellation of **RESTRICTED**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Apple cannot quickly flip a

switch and suddenly have new deals with Majors if publisher costs increase. It has no leverage
to get anything from labels between the two-year deal cycles.

V. APPLE'S PROPOSAL

78. Apple recognizes that the music industry has seen substantial growth as a result of
interactive streaming, and is proud to have been a primary driver of that growth, which

represents increased opportunity and revenue for songwriters. But the lack of predictability and parity surrounding mechanical royalties is a significant problem for services, particularly given the slim margins and substantial costs associated with operating an interactive streaming service.

79. Accordingly, **RESTRICTED**, discussed in Section VI(A), Apple proposes a rate structure under which all services (except hardware bundles) pay the greater of (a) a percentage of revenue less performance royalties, and (b) either (i) an all-in per subscriber/active user minimum (less performance royalties) or (ii) a subscriber/active user-based mechanical floor. Due to challenges with revenue calculations related to hardware bundles, discussed more in Section V(E), the rate for hardware bundles would be a fixed mechanical floor of 33 cents per subscriber, with no revenue prong.

80. With respect to the headline percentage of revenue rate, Apple understands that the Judges are considering the appropriate headline rate during the *Phonorecords III* remand proceeding. Apple did not participate in the remand and takes no position on the headline rate in that proceeding. It will accept the rate the Judges decide and proposes adopting that same number in this proceeding as well for all services except paid music lockers, provided the rate is reasonable under the willing buyer/willing seller standard.¹²

81. The key aspects of Apple's proposal are below. They are designed with the *Phonorecords II* settlement and vacated *Phonorecords III* determination in mind, but with important modifications to improve consistency and transparency in royalties, remove label market power from the publisher royalty calculation, continue industry growth through select,

¹² For paid music lockers, it proposes retaining the 12% headline rate from *Phonorecords II*.

simple discounts and tiered music plans, and better align with Apple's direct marketplace negotiations (consistent with the new willing buyer/willing seller standard).

A. Eliminating the TCC Calculation Promotes Parity and RESTRICTED

82. A key element of Apple's proposal is elimination of TCC from the rate calculation. This serves several important goals that are consistent with my understanding of a willing buyer/willing seller standard. First, it removes the high prices that labels extract from services from the rate calculation. I understand that a willing buyer/willing seller negotiation should reflect a competitive market. From a business perspective, negotiations with labels are not that. Unlike in other negotiations, where Apple could switch to a different vendor if one vendor did not give it a good price, with labels, there are no substitutes. Apple cannot swap in one label's catalog for another's and expect users to pay premium rates for its product. Instead, it has to have the full catalog from all three Majors to be competitive. This gives Majors a lot of power to demand high prices. Including TCC in the publisher rate calculation bakes that power into publisher and songwriter royalty rates as well, which seems inconsistent with my understanding of the willing buyer/willing seller standard. Removing TCC from the rate calculation fixes this problem.

83. I also understand a willing buyer/willing seller negotiation to be between the buyer and seller of the rights at issue. TCC ties the price to the rates at which the record labels are willing to sell and the services are willing to buy sound recording rights, not the rates at which publishers are willing to sell and services are willing to buy musical work mechanical rights, and so fails the willing buyer/willing seller standard for this reason as well.

84. Second, TCC has the potential to eat away at **RESTRICTED** service margins. This happens because, with TCC, every increase in label royalties increases publisher royalties as well. And because both publishers and labels are getting an increase, a service has no way to recover the added cost, except by taking it out of its own margin. This is very problematic for a service, like Apple Music, that **RESTRICTED**. Removing TCC removes this problem and gives services more flexibility to respond to their various cost inputs.

85. Third, TCC costs can escalate quickly. For example, **RESTRICTED**
RESTRICTED TCC under the *Phonorecords II* rate of 21% is **RESTRICTED**
RESTRICTED If sound recording payments increase three percentage points, publisher royalties grow to **RESTRICTED**. The increase is even more dramatic if TCC increases to 26.2%, the rate proposed in the *Phonorecords III* determination. Using this number, a **RESTRICTED**
RESTRICTED That jumps to over **RESTRICTED** if sound recording rates increase three percentage points. Further, these jumps are not necessarily tied to an increase in total revenue or the number of subscribers. Removing TCC helps to control these types of large jumps in the percentage of total revenue owed to publishers and songwriters.

86. Fourth, TCC has the potential to give publishers and songwriters a rate increase that is not tied to the value of their musical works. Put another way, there is no reason to think that an increase in label rates should always correspond to an increase in publisher and songwriter rates. Rather, labels may make contributions, like creating recordings in Spatial Audio or providing exclusive access to particular content, that warrant additional compensation, not least because of additional costs they may have to bear. Where the underlying musical work does not change with the new sound recording format or exclusivity grant (and therefore, retains the same value), it follows that publisher and songwriter royalties should not change.

Eliminating TCC allows services to bargain with labels for things that make the service more valuable to consumers, without worrying that this will also increase publisher royalties without a corollary contribution to that additional value.

87. Finally, eliminating TCC improves parity. Because TCC tethers publisher and songwriter payments to label payments, a service that receives a favorable label deal will also get a more favorable publishing deal, even though both services offer the same music and the same type of functionality. This seems to violate the concept of a willing buyer/willing seller negotiation and creates an unequal playing field that hampers competition. For example, assuming a 21% TCC rate, a service that pays **RESTRICTED** of revenue to labels will pay only **RESTRICTED** of revenue (**RESTRICTED**.21) in all-in publisher fees (setting aside performance royalty deductions) whereas a service paying **RESTRICTED** of revenue to labels will pay **RESTRICTED** of revenue (**RESTRICTED**.21) in publisher costs, **RESTRICTED** higher merely because a third party label, that in the marketplace would play no role in negotiations between services and publishers, decided to charge one service more than the other. Apple understands from its label negotiations that **RESTRICTED**. As mentioned above, labels have indicated that **RESTRICTED** **RESTRICTED** meaning that, with TCC, established services have a competitive advantage over new market entrants because they can pay lower label *and publisher* costs given that TCC links the two. Eliminating TCC removes label favoritism from the publisher rate calculation and helps improve competition by at least ensuring that new market entrants with an unfavorable label deal will not receive an unfavorable publishing royalty rate as well.

88. Thus, to remove label market power, improve parity, and limit the risk of unpredictable and escalating TCC costs, Apple proposes eliminating TCC.

B. A Per Subscriber Minimum or Floor Provides Consistency, Protects Against Deferral of Revenue, and **RESTRICTED**

89. The next important element of Apple’s proposal is the inclusion of per-subscriber or per-active user minima for all interactive streaming services, tiered to facilitate continued market segmentation in the industry. The purpose of these minima is to protect copyright owners, who have expressed concerns about revenue deferral and loss leader strategies in the past. Apple believes that music has a value and that copyright owners should be guaranteed compensation for their works regardless of a service’s business model. The minima provide publishers and songwriters with this protection.

90. In light of the Board’s decision to retain mechanical floors in the original *Phonorecords III* determination, Apple specifically proposes adopting mechanical floors here for most services,¹³ provided the floors are set at reasonable levels (namely, the levels adopted in the *Phonorecords II* settlement and the original *Phonorecords III* decision). Apple, however, in the alternative, equally supports an all-in per-subscriber or per-user minima structure, which offers the benefit of simplicity and coherence with the all-in headline rate.

91. As described in Section VI, many of **RESTRICTED**

RESTRICTED

92. In addition to providing copyright owners consistent and predictable protection against revenue deferral, per-subscriber and/or per-active user minima/floors have several

¹³ As discussed more below, for the sake of simplicity, Apple proposes continuing to use all-in minima for Limited Offerings and Paid Locker Service, the same as they had in *Phonorecords II*.

advantages that make them a better backstop on revenue deferral than TCC. Subscriber or user-based minima create parity across services as they ensure that similar types of services pay the same minimum royalty rate. By contrast, using TCC as a backstop on revenue deferral means royalties paid depend on label preferences for one service over another.

93. Subscriber or user-based minima also increase transparency, as minima/floors are tied to a single variable: the number of subscribers. By contrast, TCC ties royalties to the extensive (confidential) web of royalties in label agreements.

94. Apple's proposal also adds consistency to the overall rate structure by using the same protection against revenue deferral and loss leader strategies for all types of services. By contrast, under *Phonorecords II*, some types of services have only TCC as a backstop on revenue, others have TCC and all-in per-subscriber minima, and others have TCC, all-in per-subscriber minima, and mechanical floors.

95. At the same time, Apple recognizes that floors have to be set at a level that allows services to offer a variety of differentiated products that appeal to low willingness-to-pay consumers. That is why Apple proposes rolling forward the tiered floor structure from *Phonorecords II*, under which products with limited functionality (e.g., lack of portability) have lower rates, and adding reduced tiers for ad-supported services and a new category of service called, "Full-Catalog Limited Offerings," that applies to services with substantially limited functionality compared to premium services.¹⁴

¹⁴ To further facilitate such differentiation, Apple proposes adding a new services category called a "Full-Catalog Limited Offering," defined as a "Subscription Offering providing Eligible Interactive Streams or Eligible Limited Downloads for which the features or functionality by which the End User can listen to sound recordings are substantially limited relative to Subscription Offerings in the marketplace providing unlimited

96. Specifically, Apple proposes the following tiers, which are mechanical-only floors except where otherwise indicated:

Mechanical Floors

Offering	Mechanical Floor	Basis
Standalone Non-Portable Subscription Offering - Streaming Only	15 cents per Subscriber per month	<i>Phonorecords II</i> and <i>Phonorecords III</i> original decision and remand proposals
Standalone Non-Portable Subscription Offering - Mixed	30 cents per Subscriber per month	<i>Phonorecords II</i> and <i>Phonorecords III</i> original decision and remand proposals
Standalone Portable Subscription Offering	50 cents per Subscriber per month	<i>Phonorecords II</i> and <i>Phonorecords III</i> original decision and remand proposals
Full-Catalog Limited Offering	25 cents per Subscriber	50% of the Standalone Portable Subscription Offering price. The reduced price takes into account the limited functionality of the product, just as floors are reduced for other offerings with limited functionality, such as Limited Offerings and Non-Portable services. The 25 cent floor is greater than the floor for both Limited Offerings and Standalone Non-Portable Subscription Offerings-Streaming Only.
Standalone Free Nonsubscription/Ad Supported Services	The royalty floor that would apply to the Offering if it were a Subscription Offering for each Active Subscriber during the month, reduced by the percentage of total listening hours of the applicable Offering	Pulls through the mechanical floor appropriate to the service offering, adjusted to account for the time the consumers spend listening to advertisements (rather than music) on the ad-funded service.

features or functionality (*e.g.*, a product with substantially limited capability to access recordings on-demand), but with a comprehensive catalog of sound recordings.

	comprising advertising during the applicable Accounting Period. ¹⁵	
Bundled Subscription Offering, i.e., a bundle of services that includes an interactive streaming service.	The royalty floor that would apply to the music component of the bundle if it were offered on a standalone basis for each Active Subscriber during the month. Per Apple's proposal, the bundle mechanical royalty pool is then apportioned based on the standalone prices of the components of the bundle.	As discussed more below, Apple proposes using the minimum for the equivalent service for bundles, but then apportioning royalties based on the stand-alone subscription prices of the components of the bundle. RESTRICTED
Hardware Bundle, i.e., bundle containing an interactive streaming service and hardware	33 cents per Active Subscriber	RESTRICTED

All-In Minima

Offering	All-In Minimum	Basis
Limited Offerings	18 cents per Subscriber per month	<i>Phonorecords II</i>
Paid Locker Service	17 cents per Subscriber per month	<i>Phonorecords II</i>

C. Discounts For Family Plans, Student Plans, and Trial Periods Promote Industry Growth and Are **RESTRICTED**

97. Next, **RESTRICTED**, Apple proposes discounts on minima for family, student, and trial periods. Specifically, Apple proposes a 50% discount on

¹⁵ In other words, if consumers of a service listen to 5 minutes of advertisements per hour of listening to the service, the rate would be reduced by 8.3% (5 divided by 60).

minima for student plans. For family plans (and family bundles), it proposes minima of 1.5 times individual plans. For trials, it proposes maintaining the current one-month royalty free trial period, followed by a 50% discount on minima during the second and third month of the trial.

98. As described above, discounted plans and trial periods help increase interactive streaming revenue and draw more consumers into the interactive streaming market.

D. All-In Royalty Pools With A Deduction For Performance Royalties Are Critical To Predictability and **RESTRICTED**

99. Apple proposes retaining the all-in royalty pool with a deduction for publisher/songwriter performance royalties as in the *Phonorecords II* settlement and Apple's

RESTRICTED

100. As discussed, to operate its service, Apple must have performance and mechanical rights from publishers and songwriters. One has no value without the other. An all-in royalty pool from which performance royalties are deducted reflects this reality and helps control costs for musical works licenses because publishers and PROs (which, aside from GMR, have publishers on their Boards directing policies and rates) use the all-in rate as a guide in negotiations.

101. Importantly, the performance royalties are paid to publishers *and songwriters*. Therefore, the performance deduction from the all-in pool in no way reduces the total amount of royalties paid to publishers and songwriters. They always receive at least the full all-in rate. But the all-in rate does help prevent the total musical works royalties that services owe from escalating.

E. **Reduced Fees for Bundles Promote Revenue Growth and** RESTRICTED

102. Finally, RESTRICTED, Apple proposes three specific revisions related to bundles.

103. First, it suggests having two categories for bundles that incorporate an interactive streaming service, one for service bundles (i.e., bundles comprising several services) and another for hardware bundles (i.e., bundles in which an interactive streaming service is paired with a product). This reflects the different nature of service and hardware bundles, with service bundles typically involving monthly payments and hardware bundles involving a one-time payment at the point of purchase. To achieve this, Apple proposes modifying the current definition of Bundled Subscription Offering and adding a new definition for Hardware Bundle as shown below:

Bundled Subscription Offering means a Subscription Offering providing Licensed Activity consisting of Eligible Interactive Streams or Eligible Limited Downloads that is made available to End Users with one or more other products or services (including products or services subject to other subparts) as part of a single transaction without pricing for the subscription service providing Licensed Activity separate from the product(s) or service(s) with which it is made available (e.g., a case in which an End User can buy a **subscription for access to a television streaming service, fitness service, and** ~~portable device and one-year access to a subscription service providing~~ Licensed Activity for a single price).

Hardware Bundle means a Subscription Offering providing Licensed Activity consisting of Eligible Interactive Streams or Eligible Limited Downloads that is made available to End Users with one or more other products capable of rendering audio playback comprising Licensed Activity as part of a single transaction without pricing for the subscription service providing Licensed Activity separate from the product(s) with which it is made available (e.g., a case in which an End User can buy a portable device and one-year access to a subscription service providing Licensed Activity for a single price). Royalties shall be calculated on a “Hardware Bundle” basis for two years only, after which the royalty that would apply to the Offering if sold on a standalone basis shall apply.

104. Second, RESTRICTED, Apple proposes that royalties from Bundled Subscription Offerings, like Apple One, be allocated to

reflect the proportional value of the music service based on the standalone price of the components of the bundle. In other words, if the cost of the bundle reflects an 80% discount on the total standalone price of the various offerings, then the mechanical royalty pool (whether determined via a percent of revenue or a minimum) should be 80% as well.

105. Third, **RESTRICTED**

Apple proposes that the royalty calculation for Hardware Bundles be 33 cents per active user for two years, without a percent of revenue calculation. The reason for this is that, unlike with Bundled Subscription Offerings, where subscribers typically pay for the bundle on a monthly basis, hardware bundles involve a one-time fee for the hardware with the music service included with the purchase for a specified period of time. Allocating that one-time fee between the hardware and the service, and then further allocating the service value across multiple months, is a complicated process that lacks transparency for copyright owners. Therefore, Apple proposes a fixed mechanical minimum for up to two years per subscription plan with no percent of revenue prong, just like that found in its agreements, for hardware bundles. After that, royalties would revert to the royalties for the standalone offering.

106. These reduced royalties for bundles make sense because, as discussed above, bundles play an important role in ensuring that people who might not otherwise join a subscription service pay for music. Consumers also have come to expect bundled pricing in the digital age. If services cannot offer bundles that include music, music risks being left behind. Without reduced royalties, however, it would be very difficult for Apple to offer bundles, as it would be paying full price for music, while receiving only a discounted price from consumers. Accordingly, Apple proposes discounts based on **RESTRICTED**

RESTRICTED which fairly allocate the cost of offering bundles between copyright owners and services.

F. The Proposed Rates Should Apply to All Licensed Activity Regardless of the Specifications of the Sound Recording

107. Finally, Apple's proposal applies to all musical works, regardless of the quality or specifications of the digital file in which they are embodied. One recent trend in music streaming is for labels to provide interactive streaming services with audio files with particular specifications that enable services to give their consumers a higher quality audio experience. The value of the composition does not change with the specifications of the digital file in which it is embodied. Put another way, whether the audio is cassette quality, CD quality, or something more, the musical work is the same. Therefore, royalties should be the same as well.

108. Publishers also do not bear any of the incremental cost of making higher-quality sound recordings available; rather, those costs are entirely borne by labels and digital service providers. Accordingly, there is no reason for publishers and songwriters to receive higher royalties just because their musical works are embodied in high-quality recordings.

G. Other Revisions to *Phonorecords II*

109. In addition to these key edits to the *Phonorecords II* regulations, Apple proposes a few smaller edits for clarity and accuracy.

110. Because services offer non-royalty bearing content, such as music in the public domain, the payable royalty pool should be apportioned to reflect the percentage of plays subject to the Section 115 license. That way, services whose consumers play non-royalty bearing music will pay less than the headline rate, which makes sense because the content the consumers are

using on the service is not Section 115 activity. For example, imagine a service that develops a niche in the classical music market, such that 50% of the plays on the service are public domain works. It does not make sense that that service should pay the same percentage of revenue to copyright owners as a service where 100% of the plays are from Section 115 content. Apple's proposal adjusts royalties accordingly.

111. The calculation of service revenue should be revised to improve clarity and provide a deduction for certain costs, such as taxes and third party billing fees, that are unavoidable in providing interactive streaming services to the public. This is similar to how ad-funded services deduct the cost of obtaining advertising revenue.

112. Various provisions from *Phonorecords II* and *Phonorecords III* can be removed as outdated in light of the Music Modernization Act.

VI. APPLE'S LICENSE AGREEMENTS

113. For the reasons described, the key elements of Apple's proposal all make sense from a practical perspective. **RESTRICTED**

114. As noted above, to provide the Apple Music service, Apple effectuates agreements with three groups in the music industry: Publishers (who represent songwriters), Performance Rights Organizations (who license performance rights in musical works), and Labels (who license the sound recordings).

115. Several aspects of these deals **RESTRICTED**

[REDACTED]

[REDACTED]

A. Apple's **RESTRICTED** for Apple Music

116. When Apple first launched Apple Music, it **RESTRICTED**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] APL-078;

APL-019; APL-022; APL-034–APL-034; APL-036–APL-039; APL-041–APL-042; APL-

044; APL 059–APL-060; APL-079; APL-080.

117. At its launch, **RESTRICTED**

[REDACTED]

[REDACTED]

¹⁶ Like the Majors, the catalogs of each of these publishers are also “must haves.”

RESTRICTED

attached as

APL-081.

118. Over time,

RESTRICTED

attached as exhibits APL-021;

APL-023; APL-028–032; APL-035; APL-040; APL-043; APL -082–APL-105; APL-156

RESTRICTED

119. These

RESTRICTED

120. First,

RESTRICTED

121. Second, as just noted,

RESTRICTED

concerns about deferred revenue.

122. Third,

RESTRICTED

RESTRICTED

123. Apple's RESTRICTED

To improve trust between Apple Music and the creative community, RESTRICTED

124. Fourth, RESTRICTED

125. Fifth, RESTRICTED

. APL-023;

APL-043. For example, the RESTRICTED

APL-043.

126. Finally, RESTRICTED

APL-019; APL-021; APL-022; APL-028.

RESTRICTED

B. Apple's PRO Agreements for Apple Music

127. [REDACTED] **RESTRICTED** [REDACTED], Apple has agreements with the PROs ASCAP, BMI, SESAC, and GMR (the "PRO Agreements"), which are largely controlled by the publishers, for the musical works performance rights in connection with Apple Music. As with the mechanical rights, publishers own the performance rights. It is not possible to operate Apple Music without both and, from Apple's perspective, it does not matter how royalties are split between performance and mechanical rights as, either way, the money goes to the publishers and songwriters.

128. ASCAP, BMI, SESAC, and GMR are responsible for licensing the vast majority of performance rights in musical works. Apple negotiated [REDACTED] **RESTRICTED** [REDACTED]

[REDACTED] True and correct copies of these agreements and relevant amendments are attached as **APL-016; APL-024–APL-028; APL-047; APL-157–159; APL-133–APL-134; APL-208.**

129. [REDACTED] **RESTRICTED** [REDACTED]

130. Second, [REDACTED] **RESTRICTED** [REDACTED]

RESTRICTED

131. Third, RESTRICTED

. For example, as set forth RESTRICTED

APL-047; APL-133–APL-134.

132. Finally, RESTRICTED

APL-016; APL-027; APL-208. RESTRICTED

C. Apple's Label Agreements for Apple Music

133. As discussed, Apple also has agreements with labels for sound recording rights. Apple initially entered into agreements with the Majors (the "Label Agreements") **RESTRICTED** [REDACTED] True and correct copies of the agreements and significant amendments are attached as **APL-046; APL-067–APL-077; APL-160; APL-054–APL-055.**

134. Although these agreements are concerning due to the negotiating power of labels (discussed previously), they contain several provisions **RESTRICTED** [REDACTED]. In fact, given the labels' strong negotiating positions, the fact that they **RESTRICTED** [REDACTED] *benefits* rights holders.

135. First, **RESTRICTED** [REDACTED]
[REDACTED]
[REDACTED].

136. Second, **RESTRICTED** [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

137. Third, [REDACTED] RESTRICTED

[REDACTED]

[REDACTED]

138. [REDACTED] RESTRICTED

[REDACTED]

[REDACTED]

[REDACTED]

139. Fourth, [REDACTED] RESTRICTED .

140. Finally, [REDACTED] RESTRICTED

[REDACTED]

[REDACTED]

[REDACTED] APL-046; APL-077.

/

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/

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I declare under penalty of perjury that the following is true and correct.

Dated: October 13, 2021.



Elena Segal

**Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The Library of Congress**

In the Matter of

**Determination of Royalty Rates and Terms
for Making and Distributing Phonorecords
(Phonorecords IV)**

Docket No. 21-CRB-0001-PR (2023–2027)

WRITTEN DIRECT TESTIMONY OF STEPHEN D. PROWSE, PH.D.

(On behalf of Apple Inc.)

October 13, 2021

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LIST OF EXHIBITS IN THIS REPORT

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2	Documents Relied Upon
3	Comparison of Music Streaming Services
4	U.S. Recorded Music Revenues by Format, 1998 to 2020
5	Harry Fox Agency <i>Phono II</i> Rate Charts
6	Select Apple RESTRICTED
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I. INTRODUCTION

A. Qualifications

1. I am a Senior Managing Director in the Forensic and Litigation Services Practice at FTI Consulting, Inc. (“FTI”). FTI is a multi-disciplined consulting firm that provides various financial advisory services to corporate clients in the U.S. and abroad.
2. One of my responsibilities at FTI is to provide economic, financial, and damage quantification consulting services to clients.
3. The services I have provided include dispute advisory consulting and expert witness services in antitrust, intellectual property, breach of contract, fraud, securities-related, wrongful termination, and class certification matters.
4. I have been retained as an expert witness in hundreds of litigations. Both plaintiffs and defendants have retained me.
5. I have been qualified as an expert to testify on, among other things, antitrust and intellectual property-related issues. I have submitted analyses in hundreds of disputes and provided expert testimony in state and federal courts across the country as well as in international and domestic arbitration matters.
6. I have more than 15 years of expertise in assessing economic damages in intellectual property matters, including patent infringement, copyright, false advertising, and trade secrets cases. I have been recognized as a leading patent litigation expert witness every year since 2014 in Intellectual Asset Management’s World Leading Patent Professionals.
7. I have calculated reasonable royalties, lost profits, lost convoyed sales, damages through price erosion, and unjust enrichment, and have performed price elasticity of demand studies in such cases. I have performed such analyses in hundreds of disputes and have provided expert testimony in state and federal courts across the country as well as in international and domestic arbitration matters.
8. I have also directed numerous valuation projects related to patents, copyrights, trademarks, and trade secrets. I have determined royalty rates and other terms for licensing agreements

between related entities. I have also provided consulting advice to parties involved in licensing negotiations.

9. I have also provided advisory services to clients involved in antitrust litigation, including analyzing claims of monopolization, exclusionary business practices, tying, price discrimination, price-fixing, and predatory pricing. I have provided consulting services to numerous clients under investigation for alleged anti-competitive acts by the Department of Justice. I have also provided consulting services to clients that have pled guilty to the Department of Justice or foreign government regulatory authority price-fixing allegations to estimate their exposure to claims from customers and to help these clients negotiate favorable settlements with such customers.
10. I have performed studies to define the relevant market, assessed the competitive attributes of markets, performed pricing studies to evaluate whether alleged antitrust violations resulted in increased prices to consumers, estimated price elasticities of demand and supply using econometric and statistical methods, analyzed markets in competitive, monopolistic, and oligopolistic environments, and estimated alleged damages using econometric and statistical methods. I have performed market studies to evaluate the competitive attributes of markets and have evaluated firms' business practices to assess the firm's vulnerability to antitrust lawsuits from regulators and/or private parties.
11. Before joining FTI, I was a Principal (Partner) in the Dallas office of the Forensic Practice at KPMG LLP, where I provided similar services to clients. Before that, I was a Director at PricewaterhouseCoopers LLP.
12. Before my consulting career, I was employed by the Federal Reserve Bank of Dallas as a Senior Economist and Policy Advisor (1994-1998), and by the Board of Governors of the Federal Reserve System in Washington DC (1989-1994) as an Economist. I have also served as a Consultant Economist to the Bank for International Settlements (BIS) in Basel, Switzerland. In these positions, I provided economic and financial analysis and policy advice to the Chairman of the Federal Reserve Board, the President of the Federal Reserve Bank of Dallas, and the Director of Research at the BIS on current economic issues, financial markets, banking markets, and the banking system. I have also served as an Adjunct Professor at the Cox School of Business, Southern Methodist University (1998),

where I taught economics and finance, and currently serve as a guest lecturer in economics and finance. I started my career as a full-time economic consultant in 1998.

13. I received my B.A. in economics from Cambridge University, Cambridge, England, in 1982; my M.S. in economics from the California Institute of Technology in 1984; and my Ph.D. in economics from the University of California at Los Angeles in 1989. In addition, I am also a CFA Charterholder and a member of the Licensing Executives Society.
14. I have authored over 20 articles on industrial organization, economic and financial issues that have been published in peer-reviewed academic journals, books, and other outlets. I have also served as a referee for numerous academic research journals such as the *Journal of Finance*, *Journal of Financial Economics*, and the *Journal of Banking and Finance*.
15. **Exhibit 1** contains a copy of my current resume, including a listing of publications I have authored, and a list of my testimony experience for the last four years.
16. My business address is FTI Consulting, Inc., 2001 Ross Avenue, Suite 650, Dallas, Texas, 75201. FTI is being compensated for my services in this action at an hourly rate of \$675. Neither I nor FTI has any financial interest in the outcome of this litigation.
17. In addition, under my direction, FTI staff performed research and other support work for me on this proceeding.

B. Assignment and Scope

18. I have been retained by counsel for Apple Inc. (“Apple” or the “Company”) to provide economic analyses relevant to the determination of the terms and rates for interactive streaming royalty payments under Section 115 of the Copyright Act in the proceeding *Determination of Rates and Terms for Making and Distributing Phonorecords* (“*Phonorecords IV*” or “*Phono IV*”).¹

¹ *Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords IV)*, Docket No. 21-CRB-0001-PR (2023-2027).

19. I understand that a phonorecord means “material objects in which sounds, other than those accompanying a motion picture or other audiovisual work, are fixed.”² I also understand that a digital phonorecord delivery refers to the digital transmission of a sound recording to deliver a phonorecord and includes all phonorecords made for making the digital phonorecord delivery.³
20. I understand that a license for making and distributing physical and digital phonorecords of musical works can be obtained under Section 115 of the Copyright Act, which mandates that copyright owners must compulsorily grant the license.
21. I understand that publishers and songwriters get royalties as compensation (“mechanical royalties”) for the rights granted under the compulsory license. I also understand that currently applicable mechanical royalties are based on an agreement that resolved the *Phonorecords II* proceeding and was negotiated between several digital service providers and owners of copyrights in musical works. I further understand that the current proceeding will set the mechanical royalty rate for the time period 2023-2027.
22. I have also reviewed Apple’s proposal for determining royalty rates under Section 385. At a high level, some key features of the Apple proposal are:
- A revenue-based rate structure for all-in rates without a prong based on “Total Cost of Content” (“TCC prong”);
 - Tiered per subscriber minima to address revenue deferral concerns with discounts and adjustments for family plans, student plans, and trials;
 - All-In royalty pools with a deduction for performance royalties to determine the mechanical royalty pool;
 - Music revenue from bundled subscriptions should reflect the proportional value of the music service based on the standalone price of the components of the bundle; and
 - For hardware bundles, given the difficulty in measuring applicable monthly revenue due to a lump-sum payment and a six-month free trial, the mechanical royalty should

² 17 U.S.C. §101, available at <https://www.copyright.gov/title17/92chap1.html#101> (accessed on October 9, 2021).

³ *Digital Performance Right in Sound Recordings Act of 1995*, November 1, 1995, available at <https://www.govinfo.gov/content/pkg/PLAW-104publ39/pdf/PLAW-104publ39.pdf> (accessed on October 6, 2021) at 109 STAT. 348 (“A ‘digital phonorecord delivery’ is each individual delivery of a phonorecord by digital transmission of a sound recording which results in a specifically identifiable reproduction by or for any transmission recipient of a phonorecord of that sound recording.”).

be based on a per subscriber minimum of 33 cents for the first two years, and then at regular rates, assuming continuing subscription.⁴

C. Summary of Opinions

23. The interactive streaming industry is a booming market. The music industry has experienced substantial revenue growth in the last several years, due largely to interactive streaming. Both record labels' and publishers' revenues have gone up significantly over the last few years. There also is considerable competition in this market. Customers have a wide range of service providers and subscription tiers to consider at various price points.
24. To set rates and terms for mechanical licenses for this interactive streaming market, the Judges must use the "Willing Buyer / Willing Seller" ("WBWS") standard. From an economic perspective, in my opinion, the WBWS standard introduces two critical changes relative to the prior 801(b) factor-based rate determination:
 - The royalty rates should reflect the negotiations between relevant buyers and sellers **only**, and
 - While the rates are likely to reflect the relative bargaining strength of the two sides, **neither side** has monopoly power (or supra monopoly power through "complementary oligopoly") to set the rates.
25. Based on my analyses, my expertise in analyzing competition and intellectual property issues, the relevant economic evidence produced in the matter so far, and other evidence presented below, I have arrived at the several opinions presented below.

⁴ Apple Proposal, §385.2 and §385.21(b)(3)(ii). *Also see* Testimony of Elena Segal, *In re Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords IV)*, Docket No. 21-CRB-0001-PR (2023-2027), ¶ 105 (henceforth, "Segal Testimony").

26. *First*, in my opinion, the *Phono II* Settlement rate and rate structure for Streaming Products⁵ is a reasonable starting point to determine rates (such as minima) and a rate structure consistent with the WBWS standard.⁶
27. However, the *Phono II* Settlement for Streaming Products was determined under the previous statutory standard of the 801(b) factors. Therefore, one must scrutinize the rate structure and examine whether it is consistent with the new WBWS statutory standard.
28. *Second*, a TCC calculation, like that in the *Phono II* Settlement for Streaming Products, is not consistent with the WBWS standard.⁷ Under the TCC calculation, publisher royalties are calculated as a percentage of label royalties. But the outcome of a hypothetical “willing buyer / willing seller” negotiation between the Services⁸ and the Copyright Owners⁹ is unlikely to be the same as the outcome of unregulated negotiations between the Services and record labels.
29. Instead, a TCC calculation allows for an all-in rate (for musical works royalties) based on the cost of content, and that is problematic at least for the following reasons:

⁵ “Streaming Products” refer to (i) Standalone Portable Subscription Services (Mixed Use); (ii) Standalone Non-portable Subscriptions - Streaming; (iii) Standalone Non-portable Subscriptions - Mixed Use; (iv) Paid Locker Services; (v) Purchased Content Locker Services; (vi) Mixed Service Bundles; (vii) Music Bundles; (viii) Limited Offerings; (ix) Free Non-Subscription / Ad-Supported Services; and (x) Bundled Subscription Services.

⁶ In 2012, the Services and the Copyright Owners reached a settlement on rates and terms of mechanical licenses for years 2013 to 2017 for Streaming Products, and the Judges accepted those rates in 2013 (the “*Phono II* Settlement”). Henceforth, unless specified otherwise, when I refer to the *Phono II* Settlement rates or rate structure, I mean the *Phono II* Settlement rate and rate structure for Streaming Products.

⁷ In general terms, under the *Phono II* Settlement, royalty rates for mechanical licenses are an “all-in” rate derived from a “greater-of” rate structure with two prongs: a) a “Revenue” prong under which the all-in rate would be a fixed percentage of the total revenue generated by the relevant Streaming Product; and, b) a TCC prong under which the all-in rate would be a fixed percentage of the total cost of content associated with the relevant Streaming Product, where TCC refers to the royalty payments made by the Services to record companies for the sound recordings played by users of the relevant Streaming Product.

⁸ I refer to the five major streaming services (*i.e.*, Amazon, Apple, Pandora, Spotify, and Google) involved in this proceeding collectively as the “Services.”

⁹ I refer to the National Music Publishers’ Association and Nashville Songwriters Association International collectively as the “Copyright Owners.”

- i. The cost of content reflects the major record labels' complementary oligopoly power due to their must-have status;
- ii. The TCC prong allows the relative bargaining power of the major record labels and the Services, not the relative bargaining power of the copyright owners and the services, to determine musical works royalties;
- iii. Because the balance of bargaining power between the major record labels and the services cannot be established with sufficient certainty, a cost of content-based calculation cannot be reliably adjusted to remove the impact of imbalance in bargaining power between the major record labels and the Services.

30.

RESTRICTED

31. For these reasons, and those discussed in this report, a TCC calculation has no place in a mechanical royalty rate decided under the WBWS standard.
32. *Third*, in my opinion, the concerns purportedly addressed by the TCC prong in the *Phono II* Settlement for Streaming Products have since been alleviated or can be alleviated through minima in rate structures without creating inconsistency with the WBWS standard.
- To the extent that the TCC prong could be justified as a protection against uncertainty, that justification is largely moot, as the interactive streaming market is no longer a nascent industry.
 - To the extent that the TCC prong could be justified as a protection against revenue deferral and revenue measurement concerns (if any), those concerns can be addressed through a per subscriber per month minimum on either an all-in (“All-in Minimum”) or mechanical only (“Mechanical Floor”) basis, or both. Further, varying the minima by product, as in the *Phono II* Settlement for Streaming Products, or for other types of discounts (as in *Phono III*) is appropriate from an economic perspective. To be clear, by suggesting varying minima, I am opining that a zero minimum for an interactive streaming service will not be acceptable because a zero minimum under the rate structure I propose would mean no

protection against revenue measurement and deferral concerns, if such concerns exist.

33. *Fourth*, the mechanical royalty rate structure should be based on an all-in rate, just as the *Phono II* Settlement rate structure for Streaming Products was. In my opinion, from an economic perspective, all-in rates should be preserved for at least the following reasons:
- Mechanical and performance licenses are perfect complements and, therefore, the related royalty payments should be determined jointly; and
 - All-in rates protect the Services against supra-competitive and unpredictable payments for musical work royalties.
34. *Fifth*, it is appropriate to modify the basic royalty calculation for service bundles and hardware bundles to account for (a) appropriate allocation of revenue to the music service in bundles, and (b) the fact that, with bundles, consumers likely receive the music service at a discounted price. Given these concerns, Apple’s proposal regarding service and hardware bundle calculations is reasonable and satisfies the WBWS standard.
35. *Finally*, as further confirmation that the rate structure (for Streaming Products) I propose is consistent with the WBWS proposal, in **Exhibit 6**, I provide examples **RESTRICTED**
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
36. Therefore, in my opinion, from an economic perspective, a revenue-based rate structure (without the TCC prong) for all-in rates (*i.e.*, including performance royalties), with All-In and/or Mechanical Minima that vary by product, such as the structure proposed by Apple to determine royalty rates for Streaming Products, is a rate structure consistent with the WBWS standard, and can be used for the royalty rate determination for the 2023-2027 rate period.

D. Information Relied Upon

37. In determining my opinions, I have considered data and information from various sources, all of which are reasonably relied upon by experts in my field.
38. **Exhibit 2** lists the documents I have relied upon in forming my opinions in this action. The documents that I rely upon include documents cited in this report and its exhibits. I have also relied upon my professional experience and expertise obtained over many years as a professional economist. My review of the discovery for these proceedings is ongoing due to the large amount of information produced (some of which was produced only recently) by the parties. I am prepared to amend my analyses and perform additional analyses should I consider it necessary after receiving further information relevant to my opinions in this proceeding.
39. Although I may cite to a particular page or pages of documents in this report, such pinpoint cites are provided for clarification purposes only, and other portions of the documents cited may be relevant for my analyses in this matter. In addition, citations to a document or documents are intended to be illustrative and are not exhaustive.

II. BACKGROUND

A. Key Music Copyright Holders and Administrators

40. The music industry comprises individuals and organizations that, among other things, write songs, record songs, distribute and market recordings, promote the use of musical works, and/or represent those parties who create new music.¹⁰
41. Consider, for example, the famous song “Here Comes the Sun” from The Beatles’ iconic 1969 album, *Abbey Road*. It was written by George Harrison, performed by The Beatles, produced by George Martin, and recorded at EMI Studios under the record label “Beatles Apple Music Corps.”¹¹ The song was published by Harrisongs, a music publishing

¹⁰ “Money for Something: Music Licensing in the 21st Century,” *Congressional Research Service*, updated February 23, 2021, p. 7.

¹¹ “Story of a Song, ‘Here Comes the Sun’, The Beatles,” *Story of a Song*, added by Tala Woods, available at <https://storyofsong.com/story/here-comes-the-sun/> (accessed on October 9, 2021).

company founded in 1964 by George Harrison himself.¹² “Here Comes the Sun” consistently ranks as one of the most-streamed Beatles songs of all time.¹³ When appropriate, I will refer to this example throughout the discussion of the music industry below.

1. Songwriters and Recording Artists

42. Songwriters, like George Harrison, sometimes perform their own musical works. They can also compose songs for others to perform. Songwriters frequently enter into contractual agreements with music publishers, who often assume and/or administer the copyrights, and promote and license the songwriters’ works and collect royalties on their behalf. Music publishers and songwriters typically negotiate the allocation of royalty payments.¹⁴
43. Songwriters often have three primary sources of royalty income that they share with music publishers: mechanical royalties, synchronization royalties, and performance royalties. The mechanical royalty is paid for the reproduction and distribution of the musical work. The synchronization royalty is paid for the use of musical works in conjunction with video or film. The performance royalty is paid for the licensing of rights to perform musical works publicly.¹⁵
44. Songs are recorded by recording artists. Sometimes songwriters themselves do the recording (*e.g.*, George Harrison was a member of The Beatles). As recording artists,

¹² Ingham, Tim, “Concord’s Bicycle Music Signs Global George Harrison Publishing Deal,” *Music Business Worldwide*, January 6, 2016, available at <https://www.musicbusinessworldwide.com/concords-bicycle-music-signs-global-george-harrison-publishing-deal/> (accessed on October 6, 2021); and “Harrisons Ltd.,” *Discogs*, available at <https://www.discogs.com/label/279286-Harrisons-Ltd> (accessed on October 9, 2021).

¹³ Beech, Mark “Beatles’ Biggest Fans Revealed by 1.7 Billion Streams as ‘Abbey Road’ Climbs Charts,” *Forbes*, September 29, 2019, available at <https://www.forbes.com/sites/markbeech/2019/09/29/beatles-biggest-fans-revealed-by-1-7-billion-streams-as-abbey-road-climbs-charts/?sh=23594e082d95> (accessed on October 9, 2021).

¹⁴ “Money for Something: Music Licensing in the 21st Century,” *Congressional Research Service*, updated February 23, 2021, pp. 7-8.

¹⁵ “How Songwriters Get Paid,” *Nashville Songwriters Association, International*, available at <https://www.nashvillesongwriters.com/how-songwriters-get-paid> (accessed on September 23, 2021).

songwriters receive sound recording royalties in addition to the mechanical, synchronization, and performance royalties.¹⁶

45. Recording artists receive a share of revenues (*i.e.*, sound recording royalties) from their record labels in connection with the sound recordings on which they perform. Sound recording royalties include revenues obtained from selling physical and digital albums and singles, and the use of sound recordings in connection with movies, television, or other videos, and digital performances.¹⁷ Recording artists can also receive income from live performances, merchandise sales, and other related revenue streams.¹⁸

2. Music Publishers and Performance Rights Organizations

46. As I noted above, George Harrison published his song through his own company, and many songwriters do that as well (*i.e.*, self-publish their work). Additionally, many songwriters work with other music publishers who have three major roles: promoting the use of the musical works in their catalogs by artists and other users such as movies, television, and commercials; administering copyrights and royalty payments; and supporting songwriters in the creative process of making music.¹⁹
47. Publishing companies fall into three main categories: “Major Publishers,” “Mini-Majors,” and “Independents.”²⁰
48. The Major Publishers accounted for about 57.6% of the \$5.6 billion in global music publishing revenue in 2019. The “Major Publishers” are:

¹⁶ Wang, Amy X., “How Musicians Make Money – Or Don’t at All – in 2018,” *Rolling Stone*, August 8, 2018, available at <https://www.rollingstone.com/pro/features/how-musicians-make-money-or-dont-at-all-in-2018-706745/> (accessed on October 6, 2021).

¹⁷ “How Songwriters Get Paid,” *Nashville Songwriters Association, International*, available at <https://www.nashvillesongwriters.com/how-songwriters-get-paid> (accessed on September 23, 2021).

¹⁸ Wang, Amy X., “How Musicians Make Money – Or Don’t at All – in 2018,” *Rolling Stone*, August 8, 2018 available at <https://www.rollingstone.com/pro/features/how-musicians-make-money-or-dont-at-all-in-2018-706745/> (accessed on October 6, 2021).

¹⁹ “Money for Something: Music Licensing in the 21st Century,” *Congressional Research Service*, updated February 23, 2021, p. 7.

²⁰ Fontaine, Shamarley, “The Best Music Publishing Companies of 2021 and How to Pick One,” *Music Gateway*, March 20, 2020, available at <https://www.musicgateway.com/blog/how-to/the-best-music-publishing-companies-of-2020-how-to-pick-one> (accessed on October 6, 2021).

- i. Sony Music Publishing (formerly known as Sony/ATV Music Publishing) (25%);
 - ii. Universal Music Publishing Group (21%); and
 - iii. Warner Music Group (11.6%).²¹
49. Some smaller independent publishing companies handle only creative aspects of songwriting management, and then affiliate with one of the Major Publishers to handle royalty administration.²² These smaller publishers are often referred to as Mini-Majors because they distribute through one of the three Major Publishers. Additionally, there are independent publishers that administer their own catalogs of music and are not affiliated with Major Publishers. They are 100% individually operated with their own independent distribution. Examples of Mini-Majors and Independents include Kobalt Music Group, BMG, Concord Music, and Downtown Music Publishing. Though smaller than the Major Publishers, several Mini-Majors and Independents still own a sizeable share of publishing rights. For example, Kobalt represents more than 40% of the Top 100 songs and albums in the UK and US.²³ Kobalt represents Finneas O’Connell (songwriter for sister Billie Eilish),²⁴ Max Martin (songwriter),²⁵ and Trent Reznor (Oscar-winning songwriter).²⁶
50. Various entities assist with the collection and distribution of royalties owed to publishers and songwriters. There are Mechanical Rights Organizations (“MROs”), such as Harry Fox

²¹ “Money for Something: Music Licensing in the 21st Century,” *Congressional Research Service*, updated February 23, 2021, p. 7.

²² “Money for Something: Music Licensing in the 21st Century,” *Congressional Research Service*, updated February 23, 2021, p. 7.

²³ Fontaine, Shamarley, “The Best Music Publishing Companies of 2021 and How to Pick One,” *Music Gateway*, March 20, 2020, available at <https://www.musicgateway.com/blog/how-to-the-best-music-publishing-companies-of-2020-how-to-pick-one> (accessed on October 6, 2021).

²⁴ “Behind Billie Eilish: Songwriter Brother Finneas O’Connell on the Duo’s Unique Recording Process,” *Music Business Worldwide*, April 2, 2019, available at <https://www.musicbusinessworldwide.com/behind-billie-eilish-songwriter-brother-finneas-oconnell-on-the-duos-unique-recording-process/> (accessed on October 11, 2021).

²⁵ “Kobalt Strengthens Music Publishing Business,” *Kobalt*, February 1, 2021, available at <https://www.kobaltmusic.com/press/kobalt-strengthens-music-publishing-business> (accessed on October 11, 2021).

²⁶ Greene, Steve, “Jon Batiste, Trent Reznor, and Atticus Ross Win Best Original Score: Second Oscar Triumph for Nine Inch Nails Duo,” *IndieWire*, April 25, 2021, available at <https://www.indiewire.com/2021/04/trent-reznor-atticus-ross-win-oscar-best-original-score-1234631647/> (accessed on October 11, 2021); and “Roster,” *Kobalt*, available at <https://www.kobaltmusic.com/roster> (accessed on October 11, 2021).

Agency and Music Reports, that collect mechanical royalties.²⁷ In addition, as of 2021, the Mechanical Licensing Collective collects and distributes mechanical royalties for interactive streaming that are paid and licensed pursuant to the blanket Section 115 statutory license.²⁸

51. Publishers and songwriters use PROs (*i.e.* performance rights organizations) to collect public performance royalties for the public performance of their musical works in any commercial environment.²⁹
52. The main functions of a PRO include: 1) licensing the use of the rights they manage to music users; 2) monitoring the licensed use in order to enforce the conditions upon which the license has been granted; and 3) collecting and distributing the performance royalties payable for the authorized performance.³⁰
53. The American Society of Composers, Authors, and Publishers (“ASCAP”) is one of the major PROs in the U.S. It represents over 700,000 songwriters, composers, and music publishers and claims to license a catalog of over 11.5 million compositions. ASCAP was established in 1914 and is considered to be the first organization dedicated to protecting the rights of composers and collecting public performance royalties on their behalf.³¹

²⁷ “What are Mechanical Royalties? Who Pays Mechanical Royalties & Who Collects Them?,” *Soundcharts*, March 3, 2020, available at <https://soundcharts.com/blog/mechanical-royalties> (accessed on October 6, 2021). *See, also*, “Mechanical Royalties Guide - 2021,” *Royalty Exchange*, February 2, 2021 available at <https://www.royaltyexchange.com/blog/mechanical-royalties> (accessed on October 6, 2021).

²⁸ “What is the Mechanical Licensing Collective (MLC)?,” *Songtrust*, available at <https://help.songtrust.com/knowledge/what-is-the-mechanical-licensing-collective-mlc> (accessed on October 9, 2021).

²⁹ “What Performance Rights Organizations Do: How a PRO Can Maximize Your Royalties,” *Soundcharts*, January 28, 2020, available at <https://soundcharts.com/blog/performance-rights-organizations> (accessed on September 20, 2021).

³⁰ “What Performance Rights Organizations Do: How a PRO Can Maximize Your Royalties,” *Soundcharts*, January 28, 2020, available at <https://soundcharts.com/blog/performance-rights-organizations> (accessed on September 20, 2021).

³¹ “What Performance Rights Organizations Do: How a PRO Can Maximize Your Royalties,” *Soundcharts*, January 28, 2020, available at <https://soundcharts.com/blog/performance-rights-organizations> (accessed on September 20, 2021).

54. Broadcast Music, Inc. (“BMI”) has over 800,000 members and is ASCAP’s biggest competitor in the U.S. BMI was founded in 1939 and is known to support new genres of music. BMI is the biggest PRO on the market, with a catalog of over 15 million compositions.³²
55. SESAC (formerly known as the Society of European Stage Authors and Composers) was established in 1930 and functions in the U.S. Unlike BMI and ASCAP, SESAC is a for-profit organization—retaining a part of collected royalties as profits. Unlike BMI and ASCAP, SESAC does not have open membership, and members must be approved to join the organization. With 30,000 members, SESAC focuses on representing a limited but high-profile catalog.³³
56. Global Music Rights (“GMR”) is a recent PRO. According to the company’s website, GMR is “the first US PRO in nearly 75 years, ... founded in 2013 by industry veteran Irving Azoff as an alternative to the traditional performance rights model.”³⁴
57. ASCAP, BMI, SESAC, and GMR are subject to marketplace negotiations. ASCAP and BMI are subject to consent decrees, so if the services cannot reach an agreement with ASCAP or BMI, the matter will go to a federal district court judge in the Southern District of New York.³⁵ The rates charged by SESAC and GMR are not subject to any judicial oversight.³⁶
58. Publishers have experienced consistent and significant growth in recent years, with total revenues increasing from \$2.65 billion in 2016 to \$3.7 billion in 2019 and year-on-year

³² “What Performance Rights Organizations Do: How a PRO Can Maximize Your Royalties,” *Soundcharts*, January 28, 2020, available at <https://soundcharts.com/blog/performance-rights-organizations> (accessed on September 20, 2021).

³³ “What Performance Rights Organizations Do: How a PRO Can Maximize Your Royalties,” *Soundcharts*, January 28, 2020, available at <https://soundcharts.com/blog/performance-rights-organizations> (accessed on September 20, 2021).

³⁴ “About Us,” *Global Music Rights*, available at <https://www.globalmusicrights.com/About#who-we-are> (accessed on October 6, 2021).

³⁵ “Money for Something: Music Licensing in the 21st Century,” *Congressional Research Service*, updated February 23, 2021, p. 19.

³⁶ “Money for Something: Music Licensing in the 21st Century,” *Congressional Research Service*, updated February 23, 2021, p. 20.

growth of 10% from 2018 to 2019. This corresponds to an increase in streaming as the dominant form of music consumption and “broader industry data showing that streaming has been a significant driving force for economic success across the music community.”³⁷

3. Record Labels: Majors and Indies

59. Record labels act both as facilitators and product makers. As facilitators, the record labels (among other things) scout for promising recording artists and promote the artists and their music. As product makers, they record musical works and reproduce and distribute physical reproductions of sound recordings, including electronic reproductions to streaming services.³⁸
60. Recording artists generally contract with a record label to record music. Artists receive a share of royalties from the sales and licenses of the sound recordings, as well as the income associated with tours, merchandise, sponsorships, and movies.³⁹ Artists such as Taylor Swift and Lady Gaga, who often serve as both the singer and songwriter, receive royalties from both their written songs and sound recordings.
61. There are three major record labels whose parent company revenue comprised about 68.1% of the global recording industry’s 2019 wholesale revenue (“Majors”):
 - i. Sony Corporation (19.8%);
 - ii. Universal Music Group (31.8%); and
 - iii. Warner Music Group (16.4%).⁴⁰

³⁷ “Streaming Forward 2020,” *Digital Media Association*, p. 33, available at https://15z58v1dk1tg360t7w3les8e-wpengine.netdna-ssl.com/wp-content/uploads/2020/08/DiMA_2020_Streaming_Forward_Report.pdf (accessed on October 9, 2021).

³⁸ “Money for Something: Music Licensing in the 21st Century,” *Congressional Research Service*, updated February 23, 2021, p. 8.

³⁹ McDonald, Heather, “Learn How Tour Merchandising Works,” *The Balance Careers*, June 25, 2019, available at <https://www.thebalancecareers.com/how-does-tour-merchandising-work-2460898> (accessed on October 7, 2021); and Lane P., “Do Movie Soundtracks Really Make Artists Money,” *TheThings*, June 19, 2021, available at <https://www.thethings.com/do-movie-soundtracks-make-artists-money/> (accessed October 7, 2021).

⁴⁰ “Money for Something: Music Licensing in the 21st Century,” *Congressional Research Service*, updated February 23, 2021, p. 9.

62. A recent Goldman Sachs report noted that even in the wake of the economic upheaval and changes in consumption patterns associated with the Covid-19 pandemic, record labels are still expected to retain the lion's share of the content royalty pool (52%-58%). Goldman Sachs also estimated music streaming's share to rise to 86% of recorded music revenue by 2030 (from 56% in 2019). Record labels are forecasted to be significant beneficiaries of the growth of music streaming, and the corresponding increases in revenues.⁴¹
63. While the Goldman Sachs report expected streaming consumption to remain volatile during the pandemic, they noted that record labels would derive greater than 75% of streaming revenues from subscriptions, where payments were determined by the overall subscription revenue pool and the labels' respective market share (with a typical one-month lag). Assuming a rate of 52%-58% (average 55%), this implies streaming revenue for the recorded music market of \$10 billion in 2020 (up 19% year over year).⁴² Therefore, the Majors were expected to maintain or grow market share during the pandemic, given the depth and strength of their catalogs. Their vast financial resources also allow for further investment in artists, repertoires, and catalogues to fuel additional growth. As of April 22, 2020, an analysis of the Spotify Global Top 50 chart indicated that the Majors commanded an 89% share of streams.⁴³
64. The Goldman Sachs report also stated that record labels would likely sustain margin expansion during the pandemic given the favorable profit mix shift away from merchandising (typically 5%-10% EBITDA margin) and physical record sales (with a lower gross margin than streaming given the higher production and distribution costs), towards streaming. Cost savings could also be recognized with a shift away from travel and entertainment, marketing, and other promotions often associated with concerts and touring.⁴⁴
65. The Goldman Sachs report estimated that labels generate around 15% EBITA margins in both streaming and download, as compared to 8% in physical. Over time, they forecasted

⁴¹ "The Show Must Go On," *Goldman Sachs Equity Research*, May 14, 2020, pp. 4-5.

⁴² "The Show Must Go On," *Goldman Sachs Equity Research*, May 14, 2020, pp. 33-34.

⁴³ "The Show Must Go On," *Goldman Sachs Equity Research*, May 14, 2020, p. 34.

⁴⁴ "The Show Must Go On," *Goldman Sachs Equity Research*, May 14, 2020, p. 37.

that the streaming margin could grow to 20%-25% given more cost-effective marketing, higher profitability of catalog sales (where development and marketing costs are lower than new releases), and ongoing adaptation of the cost structure to a streaming world (conversion of fixed to variable costs and IT system upgrades enabling greater efficiencies). Partly offsetting these factors, the Goldman Sachs report also expected a greater redistribution of profits to artists over time. The report estimated that artists and repertoire costs currently account for approximately 30% of labels' revenue, having already risen significantly in recent years (17% in 2015, and 24% in 2017).⁴⁵

66. The Goldman Sachs report also noted that record labels have a vested interest in keeping a minimum level of competitive tension among various streaming platforms. Over time, the report noted that Majors' artist discovery, curation, and marketing capabilities and high market share concentrations should allow them to maintain the status quo in future negotiations.⁴⁶
67. Besides Majors, there are other independent recording label companies ("Indies"). Some notable indies include XL Recordings (a British label that signed Adele), Glassnote Records (an American label located in New York and known for indie rock and alternative hip-hop), and Epitaph Records (one of the most popular indie-rock labels in the world, located in Los Angeles).⁴⁷

B. Licensing of Musical Works by Interactive Streaming Services

68. To offer its service, an interactive streaming service licenses (a) the right to use the sound recording, which is typically held by a label, (b) the right to make and distribute phonorecords of a musical work by means of digital phonorecord deliveries, which is typically owned by a publisher and/or songwriter, and (c) the right to publicly perform the musical work by means of digital transmission, which is also owned by a publisher and/or songwriter and administered by a PRO.

⁴⁵ "The Show Must Go On," *Goldman Sachs Equity Research*, May 14, 2020, p. 45.

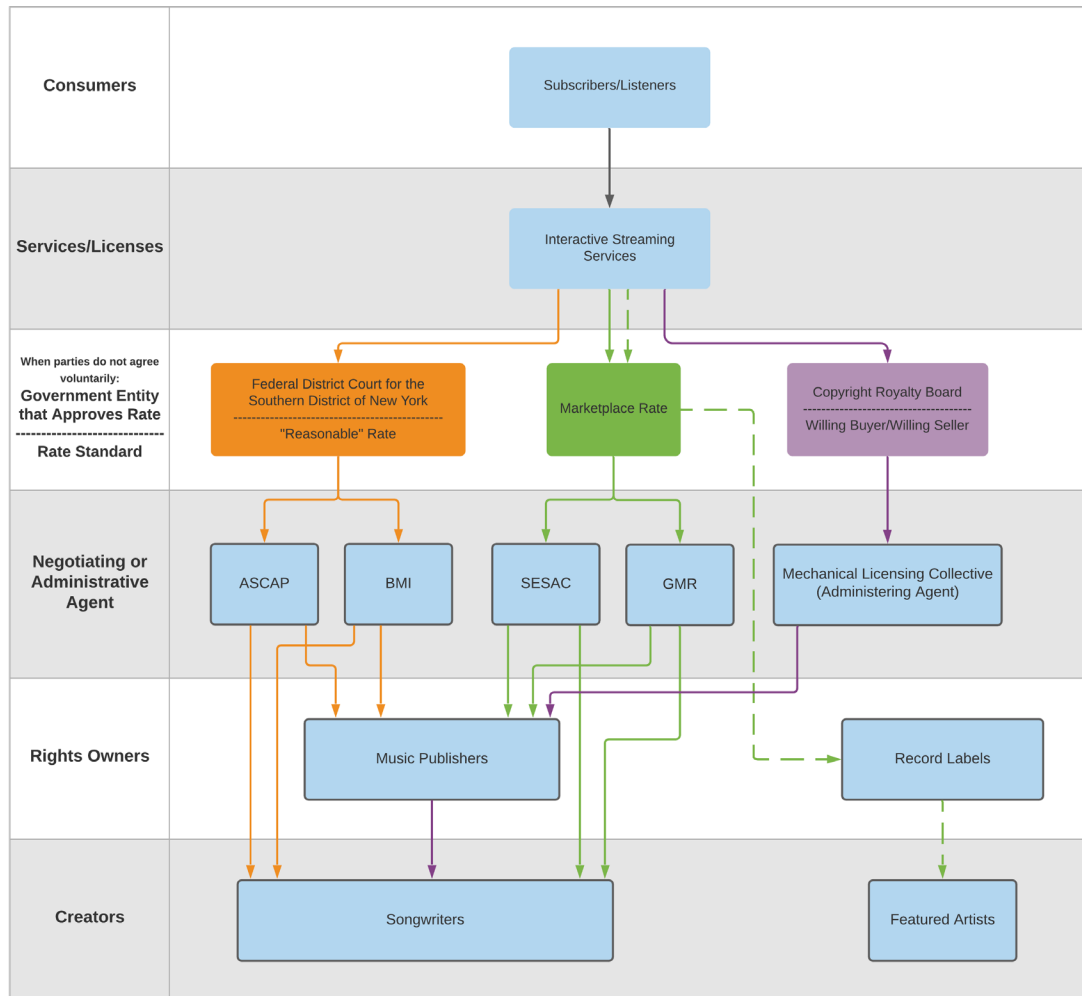
⁴⁶ "The Show Must Go On," *Goldman Sachs Equity Research*, May 14, 2020, p. 39.

⁴⁷ "Indie Record Labels Accepting Demos in 2021," *Indie Music Academy*, available at <https://www.indiemusicacademy.com/blog/10-indie-music-labels-you-should-know> (accessed on October 6, 2021).

69. The licenses for the reproduction and distribution of phonorecords of musical works are called mechanical licenses, and related royalty payments are called mechanical royalties.⁴⁸
70. The figure below delineates the process of licensing the musical works and sound recordings and determining related royalty payments.

⁴⁸ See Congressional Research Service, “Money for Something: Music Licensing in the 21st Century,” updated February 23, 2021, p. 4.

Figure 1: Process of Licensing Musical Works and Sound Recordings⁴⁹



Musical Works

- Public Performance Rights
- Public Performance Rights
- Reproduction and Distribution (Mechanical) Licenses

Sound Recordings

- - - - -→ Public Performance, Distribution, & Reproduction Licenses Combined

⁴⁹ **Figure 1** is reproduced from “Money for Something: Music Licensing in the 21st Century,” *Congressional Research Service*, updated February 23, 2021, p. 32. Songwriters receive public performance royalties from PROs directly; they receive mechanical royalties from their publishers, unless they self-administer their rights. The chart omits one category, singer/songwriters, who would receive royalties from all sources.

71. As shown, interactive streaming services, such as Apple Music and Spotify, pay both mechanical royalties and public performance royalties to songwriters and publishers for the use of their musical works. Performance royalties to songwriters flow directly through PROs, while mechanical royalties flow through the music publisher.⁵⁰
72. By contrast, many other musical work distribution platforms typically pay either a mechanical royalty or a public performance royalty, not both. For example, non-interactive streaming services (such as certain Pandora services or Sirius XM) pay performance royalties, while sellers of permanent digital downloads (“PDDs”) (such as iTunes or 7digital) pay mechanical royalties.⁵¹ Mechanical royalties are generated whenever a song is reproduced in the form of a phonorecord, both physically and digitally.⁵²

1. Mechanical Rights

73. Since at least 1831, musical works have been subject to copyright protection in the U.S. The U.S. Copyright Act established a compulsory license to use musical works in the production and distribution of phonorecords. Phonorecords include both physical and digital sound recordings of protected musical works, digital sound recordings that are downloaded, digital sound recordings that are streamed on-demand, and downloaded ringtones for use on cellular phones. This license is often referred to as the “phonorecords” or “mechanical” license.⁵³

⁵⁰ Songwriters sometimes self-publish their musical works, and in that case, they might receive mechanical royalties directly from a mechanical licensing collective. Additionally, songwriters can get paid for synchronization rights that confer the right to use musical works in conjunction with video or film. The royalty for the synchronization rights is negotiated directly in an open market. See “The Show Must Go On,” *Goldman Sachs Equity Research*, May 14, 2020, pp. 49-52.

⁵¹ For a discussion of best sites to purchase music online, see Price, Dan, “The 8 Best Places to Buy Music Online,” *MakeUseOf*, July 16, 2021, available at <https://www.makeuseof.com/best-places-to-buy-music-online/> (accessed on October 6, 2021).

⁵² Zoe, “Streaming 101: What’s the Difference Between Interactive and Non-Interactive Streaming?,” *Push.fm*, March 14, 2021, available at <https://blog.push.fm/1071/streaming-difference-between-interactive-non-interactive-streaming/> (accessed on August 16, 2021).

⁵³ “Money for Something: Music Licensing in the 21st Century,” *Congressional Research Service*, updated February 23, 2021, p. 11.

74. The mechanical right includes the right to reproduce a piece of music onto CDs, DVDs, records, or tapes.⁵⁴ The term “mechanical” dates back to the 1909 Copyright Act, when Congress required manufacturers of piano rolls and records to pay music publishers for the right to reproduce musical compositions mechanically. As a result, music publishers began issuing mechanical licenses to and collecting mechanical royalties from piano-roll and record manufacturers. The means of reproducing music have undergone numerous changes since then, but the term “mechanical rights” has endured.⁵⁵
75. In 1976, Congress revised copyright laws for the mechanical license and created the Copyright Royalty Tribunal to conduct proceedings to adjust the licensed royalty rate.⁵⁶ In 1995, Congress passed the Digital Performance Right in Sound Recordings Act (“DPRA”), to extend the mechanical license to digital phonorecord deliveries. The statute defined digital phonorecord deliveries as recordings that resulted in an identifiable reproduction by or for any transmission recipient of a phonorecord of that sound recording, regardless of whether the digital transmission is also a public performance of the sound recording or any nondramatic musical work embodied in it.⁵⁷
76. The statutory mechanical royalty rate for digital phonorecord deliveries is now set by a government body called the Copyright Royalty Board (“CRB”), which is composed of three administrative law judges (“Judges”) appointed by the Librarian of Congress who hold proceedings to determine royalty rates and terms for the Section 115 license every fifth year.
77. Publishers can also grant mechanical licenses to potential licensees through direct negotiations. The split of mechanical royalties between publishers and songwriters is

⁵⁴ “What is the Difference Between Performing Right Royalties, Mechanical Royalties, and Sync Royalties?,” *BMI*, available at https://www.bmi.com/faq/entry/what_is_the_difference_between_performing_right_royalties_mechanical_r (accessed on October 6, 2021).

⁵⁵ “Money for Something: Music Licensing in the 21st Century,” *Congressional Research Service*, updated February 23, 2021, pp. 4-5.

⁵⁶ “Copyright Royalty Tribunal,” available at <https://law.jrank.org/pages/5742/Copyright-Royalty-Tribunal.html> (accessed on October 6, 2021).

⁵⁷ *Digital Performance Right in Sound Recordings Act of 1995*, November 1, 1995, at 109 STAT. 348, available at <https://www.govinfo.gov/content/pkg/PLAW-104publ39/pdf/PLAW-104publ39.pdf> (accessed on October 6, 2021).

determined by each songwriter's contract with the publisher.⁵⁸ Typically, music publishing income is split 50/50 between the songwriter and the publisher.⁵⁹

2. Public Performance Rights

78. In 1897, Congress granted music creators the exclusive right to perform their compositions publicly. This “public performance right” allowed owners of copyrighted musical works to issue licenses to anyone who publicly performed the musical work in a wide variety of public settings. However, the sheer number and passing nature of public performances made it impossible for copyright owners to negotiate individually with each user for every single use of the musical work. It also made it difficult to identify acts of potential infringement.⁶⁰
79. As discussed in § II.A.2 above, PROs were established to address the logistical issue of how to license and collect royalty payments for public performances of music works in different settings. Today, PROs provide various types of licenses depending on the nature of use. Anyone (including terrestrial, satellite, and internet radio stations, broadcast and cable television stations, online services, bars, restaurants, live performance venues, and commercial establishments that play background music) who wants to perform a musical work publicly may do so after obtaining a license from a PRO.
80. Most commonly, licensees obtain a blanket license allowing them to publicly perform any musical work in the PRO's catalog for a flat fee or a percentage of total revenues. The songwriters and publishers share that revenue. BMI considers payments to songwriters and to publishers as a single unit equal to 200%. Where there is the usual division of

⁵⁸ “General Royalty Information,” *BMI*, available at https://www.bmi.com/creators/royalty/general_information (accessed October 6, 2021).

⁵⁹ “The Songwriter and Music Publisher Relationship: Part IV,” *Royalty Exchange*, January 4, 2018, available at <https://www.royaltyexchange.com/blog/the-songwriter-and-music-publisher-relationship-pt-4> (accessed on October 6, 2021).

⁶⁰ “Copyright and the Music Marketplace, A Report of the Register of Copyrights,” *United States Copyright Office*, February 2015, available at <https://copyright.gov/docs/musiclicensingstudy/copyright-and-the-music-marketplace.pdf> (accessed on October 6, 2021), p. 32.

performance royalties between songwriters and publishers, the writers' shares will be 100% (half of the available 200%), and the publishers' shares will be the remaining 100%.⁶¹

C. Music Distribution Channels and Industry Trends

1. Interactive Streaming Services

81. Streaming services allow consumers to stream and/or download music for a limited period of time.⁶² Interactive streaming involves transmitting a digital file electronically to a computer or other device at the specific request of the user to allow that user to listen to a recording or playlist contemporaneously with the user's request.⁶³ Also known as "on-demand" streaming, this interactive streaming enables listeners to consciously pick and choose the songs they want to hear. The songs can be individually selected, skipped, and replayed in any way that the listener decides. The intentional "interaction" with the music gives interactive streaming its name.⁶⁴ By contrast, non-interactive streaming does not allow consumers to choose songs or the exact songs, as the case may be, that they want to listen to, creating a more radio-like listening experience.
82. Below is a brief discussion of five major streaming services (*i.e.*, Amazon, Apple, Pandora, Spotify, and Google) involved in this proceeding. See **Exhibit 3** for a summary of products offered by these five streaming services.

i. Amazon

83. Amazon offers the following interactive streaming music services:
- i. Amazon Music Free
 - ii. Amazon Music Prime
 - iii. Amazon Music Unlimited

⁶¹ "General Royalty Information," *BMI*, available at https://www.bmi.com/creators/royalty/general_information (accessed on October 6, 2021).

⁶² "Listen Offline," *Spotify*, available at <https://support.spotify.com/us/article/listen-offline/> (accessed on October 9, 2021).

⁶³ "Interactive Streaming," *Songtrust*, available at <https://www.songtrust.com/music-publishing-glossary/glossary-interactive-streaming> (accessed on October 6, 2021).

⁶⁴ Zoe, "Streaming 101: What's the Difference Between Interactive and Non-Interactive Streaming?," *Push.fm*, March 14, 2021, available at <https://blog.push.fm/1071/streaming-difference-between-interactive-non-interactive-streaming/> (accessed on August 16, 2021).

iv. Amazon Music HD

84. Amazon Music Free provides free access to top playlists and thousands of stations and includes ads. It is supported by Echo devices and a growing list of Alexa-enabled devices, iOS, Android, Fire TV devices, Fire Tablet, and Amazon Music for Web.⁶⁵
85. Amazon Prime Music is included with an Amazon Prime membership, which is a paid subscription service that costs \$13 per month or \$119 per year. It has a library of 2 million songs, provides ad-free, unlimited play, and is supported by all Amazon devices.⁶⁶
86. Amazon Music Unlimited is Amazon's paid, standalone music service. It has a catalog of 75 million songs, thousands of playlists, and personalized streaming stations. Amazon makes Amazon Music Unlimited available through a variety of plans: the Unlimited Individual Plan for use on one device at a time, an Unlimited Family Plan for use on up to 6 devices at a time, a Single-Device Plan for one compatible device at a time, and a Student Plan. Amazon Music Unlimited costs \$7.99 per month for an Individual Plan for Amazon Prime members, \$9.99 per month for an Individual Plan for non-Amazon Prime members, \$3.99 per month for a single device plan, and \$0.99 per month for a student plan. The Unlimited Family Plan is \$14.99 per month.⁶⁷

⁶⁵ "What are the Differences Between the Amazon Music Subscriptions," *Amazon*, available at <https://www.amazon.com/gp/help/customer/display.html?nodeId=GW3PHAUCZM8L7W9L> (accessed on September 23, 2021).

⁶⁶ Germain, Thomas, "Best Music Streaming Services: How to choose among Apple Music, Spotify, Pandora, Tidal, and more," *Consumer Reports*, published on June 24, 2016 and updated on September 3, 2021, available at <https://www.consumerreports.org/streaming-music-services/best-music-streaming-service-for-you/> (accessed on September 16, 2021); and "What are the Differences Between the Amazon Music Subscriptions," *Amazon*, available at <https://www.amazon.com/gp/help/customer/display.html?nodeId=GW3PHAUCZM8L7W9L> (accessed on September 23, 2021).

⁶⁷ "What are the Differences Between the Amazon Music Subscriptions," *Amazon*, available at <https://www.amazon.com/gp/help/customer/display.html?nodeId=GW3PHAUCZM8L7W9L> (accessed on September 23, 2021); "Amazon Music Unlimited," *Amazon*, available at <https://www.amazon.com/music/unlimited/> (accessed on September 23, 2021); "Amazon Music Unlimited - Single Device Plan," *Amazon*, available at <https://www.amazon.com/music/unlimited/echo> (accessed on October 6, 2021); "Amazon Music Unlimited - Student Plan," *Amazon*, available at <https://www.amazon.com/music/unlimited/student/> (accessed on September 23, 2021); and "Amazon Music Unlimited - Family Plan," *Amazon*, available at <https://www.amazon.com/music/unlimited/family/> (accessed on October 9, 2021).

87. Amazon Music HD offers 75 million songs in High Definition (“HD”), millions of songs in Ultra HD (“UHD”), a growing catalog of songs in 3D on Amazon Echo Studio, thousands of playlists, and personalized streaming stations.⁶⁸ Amazon Music HD has an Individual plan for one device at a time, and a Family Plan for six devices at a time. This subscription renews with Amazon Prime Music Unlimited with no extra charge for HD.⁶⁹
88. Amazon’s music options also include trial offers that range from 30 days to three months, depending on the time of year.⁷⁰

ii. Apple

89. In 2003, after negotiating licensing agreements with all of the major record labels, Apple launched the iTunes Music Store to provide consumers a legal option for purchasing individual songs online. The iTunes Music Store revolutionized the music industry and helped transition consumers from physical CDs and cassettes to digital music consumption. Streaming was the next big wave in online music consumption. Thus, in 2015, Apple launched its own subscription, interactive streaming music service, Apple Music.⁷¹
90. Today, Apple Music subscribers pay \$9.99 per month, and the service costs \$14.99 per month for up to 6 family members. Apple Music has a discounted rate of \$4.99 for students. Consumers also have access to a free 3-month trial period.⁷² Apple Music has a

⁶⁸ “What are the Differences Between the Amazon Music Subscriptions,” *Amazon*, available at <https://www.amazon.com/gp/help/customer/display.html?nodeId=GW3PHAUCZM8L7W9L> (accessed on September 23, 2021).

⁶⁹ “Amazon Music HD,” *Amazon*, available at https://www.amazon.com/music/unlimited/hd/?encoding=UTF8&ref=sv_dmusic_2 (accessed on September 23, 2021).

⁷⁰ “Amazon Music Unlimited - Free Trial Terms & Conditions,” *Amazon*, available at <https://www.amazon.com/b/?node=20955415011> (accessed on September 23, 2021); “Amazon Music Unlimited,” *Amazon*, available at https://www.amazon.com/music/unlimited/?encoding=UTF8&ref=sv_dmusic_1 (accessed on September 23, 2021); and “Amazon Music HD,” *Amazon*, available at https://www.amazon.com/music/unlimited/hd/?encoding=UTF8&ref=sv_dmusic_2 (accessed on September 23, 2021).

⁷¹ “Money for Something: Music Licensing in the 21st Century,” *Congressional Research Service*, updated February 23, 2021, p. 2.

⁷² “Apple Music,” *Apple*, available at <https://www.apple.com/apple-music/> (accessed on September 22, 2021).

library of 75 million songs that can be accessed on demand on Apple, Windows, and Android, and a number of third-party devices, or downloaded for offline play.⁷³ After a recent update, some content is available in Dolby Atmos spatial sound for consumers with a compatible device, at no additional charge.⁷⁴ Human curators create a variety of themed playlists that assist Apple music subscribers in discovering new music.⁷⁵

91. Subscribers can also tune in to three live radio stations hosted by artists and DJs playing new music, hits, and country music. Apple Music also allows subscribers to view lyrics while listening (a feature that can also be turned off).⁷⁶
92. Listeners can also enjoy music through CarPlay, which gives drivers the ability to use selected iPhone features while driving. For example, users can get directions, make calls, send and receive messages, and enjoy favorite music through CarPlay. For music, in particular, CarPlay allows drivers to access all content from an Apple Music subscription and additional audio apps using the car's built-in controls. They can also ask Siri to play a favorite song, act as a personal DJ, or stream one of more than 100,000 live radio stations.⁷⁷
93. Today, Apple also offers the option to bundle up to six Apple services into one subscription called "Apple One." These services include Apple Music, Apple TV+, Apple Arcade, iCloud+, Apple News+, and Apple Fitness+. All members have private access to each

⁷³ Germain, Thomas, "Best Music Streaming Services: How to choose among Apple Music, Spotify, Pandora, Tidal, and more," *Consumer Reports*, published on June 24, 2016 and updated on September 3, 2021, available at <https://www.consumerreports.org/streaming-music-services/best-music-streaming-service-for-you/> (accessed on September 16, 2021); and "Apple Music," *Apple*, available at <https://www.apple.com/apple-music/> (accessed on September 22, 2021).

⁷⁴ "Apple Music announces Spatial Audio with Dolby Atmos; will bring Lossless Audio to entire catalog," *Apple*, May 17, 2021, available at <https://www.apple.com/newsroom/2021/05/apple-music-announces-spatial-audio-and-lossless-audio/> (accessed on October 6, 2021).

⁷⁵ Germain, Thomas, "Best Music Streaming Services: How to choose among Apple Music, Spotify, Pandora, Tidal, and more," *Consumer Reports*, published on June 24, 2016 and updated on September 3, 2021, available at <https://www.consumerreports.org/streaming-music-services/best-music-streaming-service-for-you/> (accessed on September 16, 2021); and Zepeda, Danny, "Apple Music still doesn't fully rely on algorithms preferring a human touch to playlists," *iMore*, July 25, 2019, available at <https://www.imore.com/apple-music-still-doesnt-fully-rely-algorithms-preferring-human-touch-playlists> (accessed on October 6, 2021).

⁷⁶ "Apple Music," *Apple*, available at <https://www.apple.com/apple-music/> (accessed on September 22, 2021).

⁷⁷ "CarPlay," *Apple*, available at <https://www.apple.com/ios/carplay/> (accessed on September 22, 2021).

service across all of their devices. For \$14.95 per month, an Individual subscription offers Apple Music, Apple TV+, Apple Arcade, and iCloud+ (with 50GB). For \$19.95 per month, a Family subscription (shared among up to six people) provides Apple Music, Apple TV+, Apple Arcade, and iCloud+ (with 200GB). For \$29.95 per month, a Premier subscription (shared among up to six people) provides Apple Music, Apple TV+, Apple Arcade, iCloud+ (with 2TB), Apple News+, and Apple Fitness+. ⁷⁸

iii. Pandora

94. Pandora is a streaming service owned by SiriusXM Holdings. ⁷⁹ Pandora provides multiple music streaming products. It has a free streaming radio-style feature that is ad-supported and allows skips and the ability to play the specific songs you want only in connection with watching ads. For \$4.99 per month, consumers listen to streaming radio without ads and unlimited skips, or specific songs with ads. For \$9.99 per month, consumers have access to the entire service ad-free and can also make and share their playlists. ⁸⁰ A family plan for \$14.99 per month is also available. ⁸¹ Pandora offers free trial periods for the paid plans, and discounts for students (Pandora Premium Student \$4.99 per month) and members of the military (Pandora Premium Military for \$7.99 per month). ⁸²

⁷⁸ “Apple One,” *Apple*, available at <https://www.apple.com/apple-one/> (accessed on September 22, 2021).

⁷⁹ “About Pandora,” *Pandora*, available at <https://www.pandora.com/about> (accessed October 6, 2021).

⁸⁰ Germain, Thomas, “Best Music Streaming Services: How to choose among Apple Music, Spotify, Pandora, Tidal, and more,” *Consumer Reports*, published on June 24, 2016 and updated on September 3, 2021, available at <https://www.consumerreports.org/streaming-music-services/best-music-streaming-service-for-you/> (accessed on September 16, 2021); and “Pandora,” *Pandora*, available at <https://www.pandora.com/> (accessed on October 6, 2021).

⁸¹ “Pandora Premium Family,” *Pandora*, available at <https://www.pandora.com/upgrade/premium/family-plan> (accessed on October 6, 2021).

⁸² “Pandora,” *Pandora*, available at <https://www.pandora.com/> (accessed on October 6, 2021); “Pandora Premium Student,” *Pandora*, available at <https://www.pandora.com/upgrade/premium/student> (accessed on September 23, 2021); and “Pandora Premium Military,” *Pandora*, available at <https://www.pandora.com/upgrade/premium/military> (accessed on September 23, 2021).

iv. Spotify

95. Spotify offers multiple music streaming products. These include ad-free on-demand access to a library of over 70 million songs and 2.6 million podcasts for a subscription fee.⁸³ The individual tier, at \$9.99 per month for individuals, offers ad-free listening, the ability to play anywhere (even offline), and on-demand playback. The duo tier for \$12.99 per month offers two premium accounts for a couple under one roof, duo mix (a playlist for two, regularly updated with music that both listeners enjoy), and the same features included in the individual plan. The family plan for \$15.99 per month is for up to 6 family members living under the same roof, a family mix (playlist for the family that is updated regularly with music enjoyed by all), blocks for explicit music, and the same features offered as the individual plan. This level also provides Spotify Kids, which is a separate app made just for children. Students pay \$4.99 per month to get the same services at the individual offerings, along with free access to Hulu (ad-supported) and Showtime. Consumers can also opt for a trial period of 30 days.⁸⁴
96. Spotify also offers a product where users can stream music on demand with ads using desktop and web applications without paying a subscription fee.⁸⁵

⁸³ “Spotify Premium,” *Spotify*, available at <https://www.spotify.com/us/premium/#plans> (accessed on October 6, 2021); and Germain, Thomas, “Best Music Streaming Services: How to choose among Apple Music, Spotify, Pandora, Tidal, and more,” *Consumer Reports*, published on June 24, 2016 and updated on September 3, 2021, available at <https://www.consumerreports.org/streaming-music-services/best-music-streaming-service-for-you/> (accessed on September 16, 2021).

⁸⁴ “Spotify Premium,” *Spotify*, available at <https://www.spotify.com/us/premium/#plans> (accessed on October 6, 2021).

97. Spotify works with several connected devices, including the Sonos One and Google Home Max smart speakers and video game consoles.⁸⁶ Desktop applications are available for macOS and Windows, and mobile applications are available for Android and iOS.⁸⁷

v. Google

98. Like other services, Google offers a variety of interactive streaming options. Prior to December 2020, it offered interactive streaming through Google Play Music, but now offers streaming through its YouTube services.⁸⁸ YouTube Music is Google’s free-to-the-user interactive streaming service supported by ads. YouTube Music Premium, which is ad-free, is \$9.99 per month for an individual and \$14.99 per month for up to six family members in a household (ages 13+). A free three-month trial is available for interested users, and student discounts are offered for \$4.99 per month. Consumers with Google smart speakers can access free ad-supported playlists and stations without signing up by asking their devices to play music.⁸⁹ There is a separate service called YouTube Premium,

⁸⁶ Germain, Thomas, “Best Music Streaming Services: How to choose among Apple Music, Spotify, Pandora, Tidal, and more,” *Consumer Reports*, published on June 24, 2016 and updated on September 3, 2021, available at <https://www.consumerreports.org/streaming-music-services/best-music-streaming-service-for-you/> (accessed on September 16, 2021); “Spotify on Sonos,” *Spotify*, available at <https://support.spotify.com/us/article/spotify-on-sonos/> (accessed on October 6, 2021); and “Spotify on Google devices,” *Spotify*, available at <https://support.spotify.com/us/article/spotify-on-google-devices/> (accessed on October 6, 2021).

⁸⁷ Germain, Thomas, “Best Music Streaming Services: How to choose among Apple Music, Spotify, Pandora, Tidal, and more,” *Consumer Reports*, published on June 24, 2016 and updated on September 3, 2021, available at <https://www.consumerreports.org/streaming-music-services/best-music-streaming-service-for-you/> (accessed on September 16, 2021); and “Spotify – Getting started,” *Spotify*, available at <https://support.spotify.com/us/article/getting-started/> (accessed on October 6, 2021).

⁸⁸ Rayome, Alison DeNisco, “Google Play Music is Shutting Down This Month. Here’s How to Transfer to YouTube Music,” *CNET*, December 3, 2020, available at <https://www.cnet.com/how-to/google-play-music-is-shutting-down-this-month-heres-how-to-transfer-to-youtube-music/> (accessed on September 17, 2021).

⁸⁹ Germain, Thomas, “Best Music Streaming Services: How to choose among Apple Music, Spotify, Pandora, Tidal, and more,” *Consumer Reports*, published on June 24, 2016 and updated on September 3, 2021, available at <https://www.consumerreports.org/streaming-music-services/best-music-streaming-service-for-you/> (accessed on September 16, 2021); and “YouTube Music Premium,” *YouTube*, available at <https://www.youtube.com/musicpremium> (accessed on September 23, 2021).

which costs \$11.99 per month and includes Google’s premium music streaming service plus ad-free YouTube videos and some original video content.⁹⁰

99. The preceding discussion demonstrates that there is significant competition for music streaming services. Customers have a wide range of service providers and subscription tiers to consider at various price points. In general terms, the structure for premium streaming services, which require subscription fees, is the same across providers. Subscribers can access playlists, large music catalogs, limited downloads, on-demand music, and radio-style (non-interactive) streaming. In terms of free services, listeners are presented with advertising, and often have access to more limited music catalogs as compared to the premium tiers. These features make the various premium plans attractive (in comparison to the free options) for many subscribers, but the large price gap between the free and premium offerings suggests there is further room for market segmentation to meet the demand of consumers with different levels of willingness to pay.

2. Other Types of Music Distribution and Consumption

100. Interactive streaming services compete in the market with several other music platforms.
101. **Non-Interactive Streaming:** Non-interactive streaming services offer users a music experience similar to that of terrestrial radio stations and are also known as “internet radio.” They offer radio-style streaming so that listeners can select playlists or stations generated by algorithms that contain songs based on a specific artist, song, or genre. Listeners have little or no interaction with music and cannot directly select songs. Instead, they hear music that is selected using various algorithms. Therefore, this type of streaming is called “non-interactive.”⁹¹ This stands in contrast to the services offered from interactive streaming services such as Spotify, Apple Music, or Amazon Music—in which the individual listeners can select which songs will play.

⁹⁰ “YouTube Premium,” *YouTube*, available at <https://www.youtube.com/premium> (accessed on September 23, 2021).

⁹¹ Zoe, “Streaming 101: What’s the Difference Between Interactive and Non-Interactive Streaming?,” *Push.fm*, March 14, 2021, available at <https://blog.push.fm/1071/streaming-difference-between-interactive-non-interactive-streaming/> (accessed on August 16, 2021).

102. In the U.S., non-interactive streaming services must pay digital performance royalties to labels and recordings artists for the use of their sound recordings.⁹² They also must pay performance royalties to publishers and songwriters for the use of their musical works. Unlike interactive streaming services, non-interactive streaming services do not have to pay mechanical royalties.⁹³
103. **Terrestrial Radio:** Consumers can listen to content on AM/FM radio stations, also known as terrestrial radio stations. These stations purchase a blanket license from PROs to perform musical works. In the U.S., only songwriters and publishers are paid royalties when their songs are played on AM/FM radio, not labels or recording artists.⁹⁴ Terrestrial radio stations do not have to pay mechanical royalties.
104. **Downloads:** While downloads have declined in popularity with the rise of streaming, they still remain a popular choice for consumers. Both labels/recording artists and publishers/songwriters receive royalties for downloads. Publisher/songwriter royalties in downloads are paid as mechanical royalties; there are no performance royalties from downloads. Publisher/songwriter royalties from downloads are set by the Copyright Royalty Board. They have been set at 9.1 cents per musical work contained in the download (with adjustments for songs over 5 minutes) since at least 2006.⁹⁵ The National Music Publishers' Association (NMPA) and Nashville Songwriters Association, Inc. (NSAI) reached an agreement with the Majors earlier this year with record labels to adopt

⁹² “Digital Performance Royalties - How They’re Distributed and Who Earns Them,” *Soundcharts*, February 24, 2020, available at <https://soundcharts.com/blog/digital-performance-royalties> (accessed on October 6, 2021).

⁹³ “What are Mechanical Royalties? Who Pays Mechanical Royalties & Who Collects Them?,” *Soundcharts*, March 3, 2020, available at <https://soundcharts.com/blog/mechanical-royalties> (accessed on October 6, 2021).

⁹⁴ “Digital Performance Royalties - How They’re Distributed and Who Earns Them,” *Soundcharts*, February 24, 2020, available at <https://soundcharts.com/blog/digital-performance-royalties> (accessed on October 6, 2021).

⁹⁵ “Mechanical Royalties Guide – 2021,” *Royalty Exchange*, February 2, 2021 available at <https://www.royaltyexchange.com/blog/mechanical-royalties> (accessed on October 6, 2021).

this same rate for the 2023 to 2027 term.⁹⁶ I understand this proposal is still under consideration before the CRB for approval.

105. CDs and other Physical Sales: Consumers also still purchase music on CD and vinyl. As with downloads, both labels/recording artists and publishers/songwriters receive royalties for CD and vinyl sales. Publisher/songwriter royalties for CDs and other physical formats are mechanical royalties; there are no performance royalties from these sales. The mechanical royalties are 9.1 cents per musical work embodied in the physical phonorecord.⁹⁷ As with downloads, NMPA and NSAI have agreed that this rate should continue through 2027.

106. Locker Services: A music locker is a music storage service or cloud music service that provides internet space to store personally owned music and then listen to that music from the cloud. Music lockers provide storage space and grant listeners access to their music library anywhere and anytime. They also allow consumers to create backups of their music and store playlists that do not have to be recreated for repeated use.⁹⁸ In many instances, locker services, particularly purchased content locker services (which allow users to store music purchased directly from the service provider or a qualified seller, as defined in the regulations) are free to use and produce no revenue for the service provider, apart from the purchase price of the actual content. However, publishers and songwriters earn mechanical royalties from music played from paid locker services (*i.e.*, locker services that have a subscription fee).⁹⁹

⁹⁶ “Motion to Adopt Settlement of Statutory Royalty Rates and Terms for Subpart B Configurations,” *Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords IV)* Docket No. 21-CRB-0001-PR (2023–2027), May 25, 2021 (henceforth, “*Phono IV* Subpart B Settlement”).

⁹⁷ “Mechanical Royalties Guide 2021,” *Royalty Exchange*, February 2, 2021 available at <https://www.royaltyexchange.com/blog/mechanical-royalties> (accessed on October 6, 2021).

⁹⁸ Gravell, Dan, “Cloud Music Lockers,” *Bliss*, January 6, 2021 available at <https://www.blisshq.com/music-library-management-blog/2021/01/06/cloud-music-lockers/> (accessed August 17, 2021).

⁹⁹ “Archived Rate Charts,” *Harry Fox Agency*, updated 2014, available at https://www.harryfox.com/content/archived_rates.pdf (accessed on October 7, 2021) (henceforth, “HFA *Phono II* Rate Charts”).

107. **Video:** Many consumers play music videos to listen to music. Labels/recording artists and publishers/songwriters receive royalties for video music plays as well.¹⁰⁰

108. **Piracy:** Despite these options, some consumers still resort to piracy to consume music. The music industry has been fighting variants of such piracy for decades. Many different actions qualify as piracy. Some examples include the creation of unauthorized versions of copyrighted music from a file-sharing service and illegally copying music using stream ripping software or mobile apps.¹⁰¹

3. Other Revenue Sources for Copyright Owners

109. In addition to royalties from music distribution, music publishers/songwriters and music labels/recording artists have many other vehicles for earning revenue.

110. As mentioned above, publishers and songwriters have earned “sync” royalties from the use of their musical works in audiovisual works, such as television, movies, and commercials. Labels/recording artists also earn revenue from television, movies, and commercials that use their sound recordings.¹⁰²

111. The growth in the gaming industry has led to new revenue opportunities for copyright owners. Publishers and songwriters can earn royalties from the placement of preexisting musical works in video games and the creation of new compositions for games, while labels and recording artists earn royalties from video games using their sound recordings.¹⁰³

¹⁰⁰ Pernicone, Julia, “Clearing Up Common YouTube Misconceptions,” *Songtrust*, published January 15, 2020, updated May 7, 2021, available at <https://blog.songtrust.com/things-you-had-wrong-about-youtube-royalties> (accessed on October 7, 2021).

¹⁰¹ Houghton, Bruce, “Think music piracy has been extinguished? Think again,” *Hypebot*, available at <https://www.hypebot.com/hypebot/2021/04/think-music-piracy-has-been-extinguished-think-again.html> (accessed on October 10, 2021).

¹⁰² “What is the Difference Between Performing Right Royalties, Mechanical Royalties, and Sync Royalties?,” *BMI*, available at <https://www.bmi.com/faq/entry/what-is-the-difference-between-performing-right-royalties-mechanical> (accessed on October 6, 2021).

¹⁰³ Lowe, Ben, “Getting Your Music Placed in Video Games,” *Songtrust*, July 13, 2021, available at <https://blog.songtrust.com/video-game-placement> (accessed on October 6, 2021).

112. The music industry has also started recognizing revenue from social media platforms like Facebook, Instagram, and TikTok.¹⁰⁴
113. The growth in the at-home fitness market has also led to a new source of income for copyright holders, as fitness services, like Peloton, must pay royalties to incorporate music into their workout videos.¹⁰⁵

4. Industry Trends

i. The U.S. recorded music revenues and streaming music revenues have been growing and are expected to grow even more

114. The U.S. recorded music revenues grew by 9.2% in 2020 to \$12.2 billion (estimated retail value¹⁰⁶), driven primarily by growth in paid, on-demand subscriptions. This marked the fifth consecutive year of growth for the industry despite Covid-19 affecting the industry through tour cancellations, retail store closures, and related upheaval.¹⁰⁷ **Figure 2** below shows the growth in the U.S. recorded music industry revenues over time.

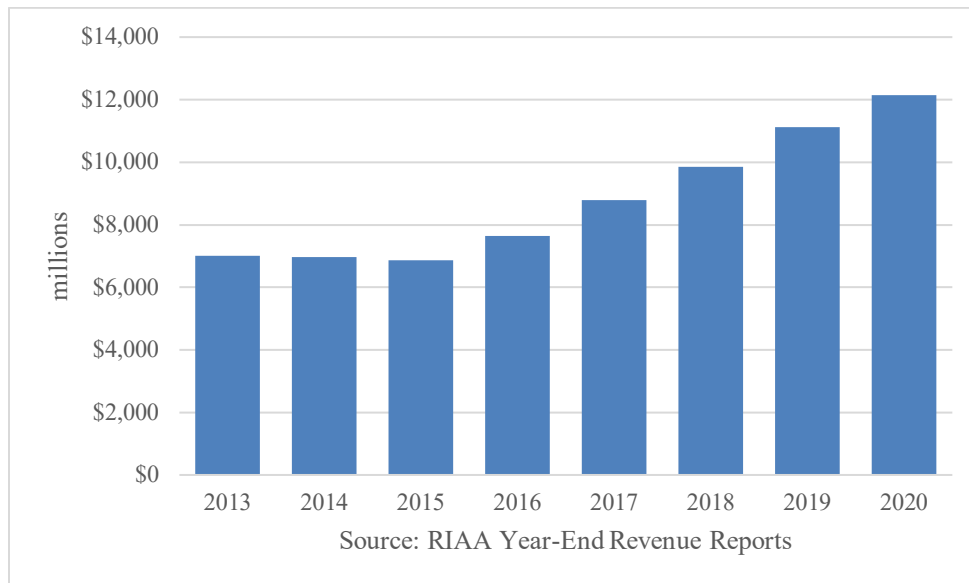
¹⁰⁴ Ingham, Tim, “Social Media, Not Streaming, Is the Music Industry’s Future,” *Rolling Stone*, December 2, 2020 available at <https://www.rollingstone.com/pro/features/social-media-tiktok-instagram-video-games-music-money-1097428/> (accessed on October 6, 2021).

¹⁰⁵ Ingham, Tim, “Social Media, Not Streaming, Is the Music Industry’s Future,” *Rolling Stone*, December 2, 2020 available at <https://www.rollingstone.com/pro/features/social-media-tiktok-instagram-video-games-music-money-1097428/> (accessed on October 6, 2021).

¹⁰⁶ Retail Value is the value of shipments at recommended or estimated list price. Formats with no retail value equivalent included at wholesale value. See Friedlander, Joshua P., “Year-End 2020 RIAA Revenue Statistics,” *RIAA*, available at <https://www.riaa.com/wp-content/uploads/2021/02/2020-Year-End-Music-Industry-Revenue-Report.pdf> (accessed on September 28, 2021).

¹⁰⁷ Friedlander, Joshua P., “Year-End 2020 RIAA Revenue Statistics,” *RIAA*, available at <https://www.riaa.com/wp-content/uploads/2021/02/2020-Year-End-Music-Industry-Revenue-Report.pdf> (accessed on September 28, 2021).

Figure 2: U.S. Recorded Music Industry Revenues Over Time¹⁰⁸



115. See **Exhibit 4** for a breakdown of U.S. recorded music revenues by distribution channels (e.g., Paid streaming, ad-supported streaming, sale of recorded music in other formats such as CDs, records). **Exhibit 4** illustrates the U.S. recorded music revenues since 1999. In the ten years between 1999 (the U.S. recorded music industry’s peak revenue year), and 2009 (the adoption of the *Phono I* Settlement rate structure), the revenues experienced a contraction in all but one year. In the eleven years between 2009 and 2020, the industry continued to contract for the first five years, plateaued in 2015, and has since experienced strong growth at a cumulative average growth rate of 10.8%.

¹⁰⁸ Recorded music industry revenue refers to the value of shipments at recommended or estimated list price; formats with no retail value equivalent included at wholesale value.

Friedlander, Joshua P., “Year-End 2020 RIAA Revenue Statistics,” *RIAA*, available at <https://www.riaa.com/wp-content/uploads/2021/02/2020-Year-End-Music-Industry-Revenue-Report.pdf> (accessed on September 28, 2021); Friedlander, Joshua P., “RIAA 2018 Year-End Music Industry Revenue Report,” *RIAA*, available at <https://www.riaa.com/wp-content/uploads/2019/02/RIAA-2018-Year-End-Music-Industry-Revenue-Report.pdf> (accessed on September 28, 2021); Friedlander, Joshua P., “News and Notes on 2016 RIAA Shipment and Revenue Statistics,” *RIAA*, available at <https://www.riaa.com/wp-content/uploads/2017/03/RIAA-2016-Year-End-News-Notes.pdf> (accessed September 28, 2021); and Friedlander, Joshua P., “News and Notes on 2014 RIAA Music Industry Shipment and Revenue Statistics,” *RIAA*, available at https://www.riaa.com/wp-content/uploads/2015/09/2013-2014_RIAA_YearEndShipmentData.pdf (accessed September 28, 2021) (hereinafter, collectively, “RIAA Year-End Revenue Reports”).

116. Interactive streaming has been the clear engine of growth in recorded music industry revenues, expanding every year since 2009 at a cumulative average growth rate of 38.5%. Though the growth in interactive streaming was initially insufficient (in dollar terms) to offset the continuing contraction of non-streaming distribution channels, since 2015, streaming's share of total revenues (56.6%) has combined with its rapid growth to pull the market towards continuing expansion—for the first time since 1999. Relatedly, a Goldman Sachs report discussing the global music streaming industry notes:

*Streaming returned the recorded music market back to growth in 2015 following 15 years of decline (average -4% [per annum]) due to piracy and unbundling. Since 2015, the industry has grown at an average rate of 10% [per annum] with an acceleration to c.12% in the last three years based on IFPI data.*¹⁰⁹

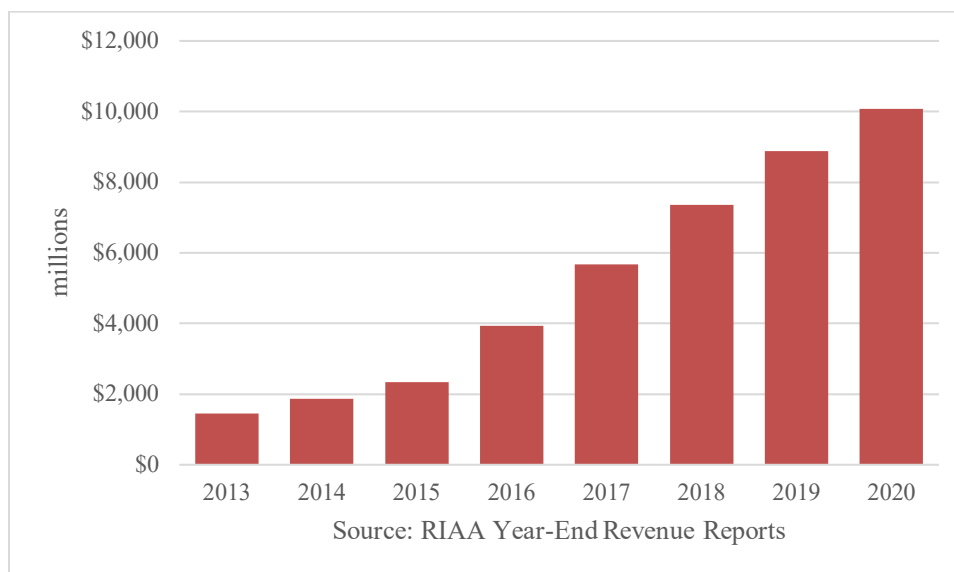
117. Streaming music revenues grew 13.4% to \$10.1 billion in 2020.¹¹⁰ This category includes paid subscription services such as Spotify, Apple Music, and Amazon Music Unlimited, ad-funded services, and internet radio services. The streaming category also includes music license revenues from Facebook for the first time, and revenue from streaming fitness services, which were first included in 2019.¹¹¹ **Figure 3** below shows the growth in streaming music revenues over time.

¹⁰⁹ “The Show Must Go On,” *Goldman Sachs Equity Research*, May 14, 2020, p. 32.

¹¹⁰ This estimate is based on recorded music industry revenue, which is the value of shipments at recommended or estimated list price (formats with no retail value equivalent included at wholesale value). See RIAA Year-End Revenue Reports.

¹¹¹ Friedlander, Joshua P., “Year-End 2020 RIAA Revenue Statistics,” *RIAA*, available at <https://www.riaa.com/wp-content/uploads/2021/02/2020-Year-End-Music-Industry-Revenue-Report.pdf> (accessed on September 28, 2021).

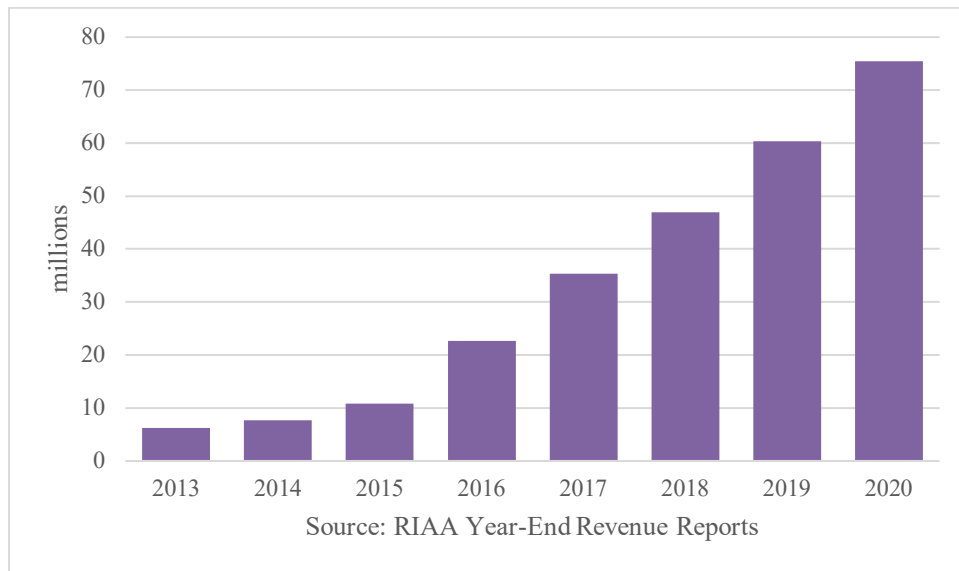
Figure 3: U.S. Music Streaming Industry Revenues, 2013-2020¹¹²



118. Paid subscription services continued to be the primary driver of music streaming revenue increases. These subscriptions break into two groups: full-service paid subscriptions and limited tier paid subscriptions (services limited by factors such as mobile access, catalog availability, product features or device restrictions, *e.g.*, Amazon Prime, Pandora Plus, and streaming fitness services). In 2020, revenue from full-service paid subscriptions grew 14.6% to \$7.0 billion. Limited tier paid subscriptions grew 13.4% to \$724 million. Total paid subscriptions together accounted for 64% of total revenues, at estimated retail value. **Figure 4** below shows the growth in the number of paid streaming subscriptions over time.

¹¹² U.S. Music Streaming Industry Revenues refer to retail value of paid subscriptions, limited tier paid subscriptions, on demand streaming (ad-supported), and other ad-supported streaming, as well as SoundExchange distributions (payments to performers and copyright holders for digital and customized radio services under statutory licenses. Includes non-interactive streaming, satellite radio, and cable TV music services). See Friedlander, Joshua P., “Year-End 2020 RIAA Revenue Statistics,” *RIAA*, available at <https://www.riaa.com/wp-content/uploads/2021/02/2020-Year-End-Music-Industry-Revenue-Report.pdf> (accessed on September 28, 2021).

Figure 4: U.S. Paid Streaming Subscriptions, 2013-2020¹¹³



119. The music streaming revenue growth is mostly driven by the growth in the number of paid subscriptions (to on-demand streaming services), which continued to increase at double-digit rates in 2020. The average number of subscriptions grew by 15 million from 60.4 million in 2019 to 75.5 million in 2020, the biggest ever increase in a single year. These figures exclude limited-tier services and count multi-tier user plans as a single subscription.¹¹⁴

120. Covid-associated events slowed advertising revenue growth across many forms of media and impacted ad-supported on-demand revenues for music. Yet revenues from these services (such as YouTube and the ad-supported version of Spotify) still grew 16.8% to

¹¹³ The figure shows subscription volume, which is annual average number of subscriptions, excluding limited tier. See Friedlander, Joshua P., “Year-End 2020 RIAA Revenue Statistics,” *RIAA*, available at <https://www.riaa.com/wp-content/uploads/2021/02/2020-Year-End-Music-Industry-Revenue-Report.pdf> (accessed on September 28, 2021).

¹¹⁴ Friedlander, Joshua P., “Year-End 2020 RIAA Revenue Statistics,” *RIAA*, available at <https://www.riaa.com/wp-content/uploads/2021/02/2020-Year-End-Music-Industry-Revenue-Report.pdf> (accessed on September 28, 2021).

\$1.2 billion in 2020, compared with an average of nearly 30% growth rate in the three years prior.¹¹⁵

121. Revenues from digital customized radio services grew 3.9% to \$1.2 billion in 2020. The category includes SoundExchange distributions for revenues from services like Sirius XM and Internet radio stations, as well as payments directly paid by similar services. SoundExchange distributions of \$947 million were up 4.3% versus the previous year, while other ad-supported streaming revenues of \$211 million were up 1.9%.¹¹⁶
122. Significantly, this growth in streaming revenue has more than offset the slight decrease in revenue from downloads and CDs. From 2019 to 2021, revenues fell \$144.9 million from digitally downloaded music and \$147.4 million from CDs. Revenues from vinyl increased by \$139.6 million, surpassing revenue from CDs for the first time since 1986. Thus, the net decrease in physical sales was just \$7.8 million, more than offset by the \$900 million increase in paid subscription services alone.¹¹⁷
123. Put another way, on the whole, music streaming is increasing total music industry revenue.
124. As discussed below, both publishers and record labels have benefitted significantly from the music streaming industry revenue growth.

ii. Publishers have profited significantly from streaming revenue growth

125. Publishers' total revenues increased from \$2.65 billion in 2016 to \$3.7 billion in 2019. They also experienced year-on-year growth of 10% from 2018 to 2019. This corresponds to an increase in streaming as the dominant form of music consumption and "broader

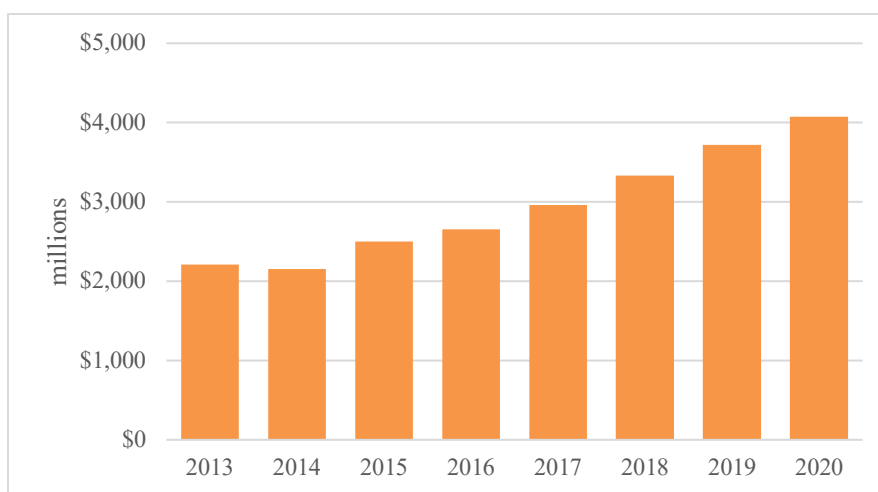
¹¹⁵ Friedlander, Joshua P., "Year-End 2020 RIAA Revenue Statistics," *RIAA*, available at <https://www.riaa.com/wp-content/uploads/2021/02/2020-Year-End-Music-Industry-Revenue-Report.pdf> (accessed on September 28, 2021).

¹¹⁶ Friedlander, Joshua P., "Year-End 2020 RIAA Revenue Statistics," *RIAA*, available at <https://www.riaa.com/wp-content/uploads/2021/02/2020-Year-End-Music-Industry-Revenue-Report.pdf> (accessed on September 28, 2021). Among other functions, SoundExchange collects and distributes digital performance royalties for sound recordings pursuant to the Section 114 compulsory license. See "About SoundExchange," *SoundExchange*, available at <https://www.soundexchange.com/about/> (accessed on October 11, 2021).

¹¹⁷ "U.S. Recorded Music Revenues by Format," *RIAA*, published May 11, 2018, updated February 26, 2021, available at https://public.tableau.com/app/profile/riaa1295/viz/U_S_RecordedMusicRevenuesbyFormat_0/RevenuebyFormat (accessed October 7, 2021).

industry data showing that streaming has been a significant driving force for economic success across the music community.”¹¹⁸ **Figure 5** that shows the U.S. music publishing industry revenues. In the seven years since the adoption of the *Phono II* Settlement in 2013, U.S. music publishers have experienced a revenue expansion in all but one year and at a cumulative average growth rate of 9.2%.

Figure 5: U.S. Music Publishing Industry Revenue and Growth, 2013-2020¹¹⁹



126. Music publishing catalogues are also gaining momentum as an asset for institutional investments, fueled by the way streaming compensates catalog recordings as transactional business models never did. Such transactions range from large catalogue mergers and acquisitions to investment vehicles for songwriters’ shares (such as the Hipgnosis Fund and Royalty Exchange). Since 2010, the number of publicly announced music catalogue

¹¹⁸ “Streaming Forward 2020,” *Digital Media Association*, p. 33, available at https://15z58v1dk1tg360t7w3les8e-wpengine.netdna-ssl.com/wp-content/uploads/2020/08/DiMA_2020_Streaming_Forward_Report.pdf (accessed on October 9, 2021).

¹¹⁹ The figure shows publishing royalties paid by licensors to publishers and copyright owners. Ingham, Tim, “How much money is the US music publishing industry making? A billion dollars more than it was 4 years ago,” *Music Business Worldwide*, available at <https://www.musicbusinessworldwide.com/how-much-money-is-the-us-music-publishing-industry-making-a-billion-dollars-more-than-it-was-four-years-ago> (accessed September 28, 2021); and “Music Publishing Revenue Topped \$4B in 2020, Says NMPA | Billboard,” *NMPA*, June 15, 2020, available at <https://www.nmpa.org/music-publishing-revenue-topped-4b-in-2020-says-nmpa/> (accessed on September 28, 2021).

transactions – across recordings and publishing – totaled \$6.5 billion. There was also a large volume of non-disclosed transactions during this period. Streaming is the catalyst for such changes, as streaming pays songwriters mechanical and performance royalties for every play of their songs into the indefinite future, versus the one-time mechanical royalty that is paid at the time of recording for vinyl, CDs, and downloads. Streaming represented 27% of publisher revenues in 2018, and is set to represent approximately 50% of publishers’ revenues by 2026.¹²⁰

iii. Record labels have also benefitted from streaming

127. The Goldman Sachs report notes that record labels will benefit significantly from the growth of music streaming because “they receive **52%-58% royalty rates from the major distributors — rates which [the Goldman Sachs analysts] do not expect to change** in the near to medium term.”¹²¹ As per Apple’s witness statement, Apple pays **RESTRICTED** of the revenue from Apple Music to labels.¹²²
128. The Goldman Sachs report further notes that revenue for record labels is expected to grow at a cumulative average growth rate of 7% to \$45 billion by 2030.¹²³
129. **Figure 6** shows the U.S. record label industry revenues over time. Since the adoption of the *Phono II* Settlement in 2013, U.S. record labels have experienced a revenue expansion every year at a cumulative average growth rate of 7.7%.

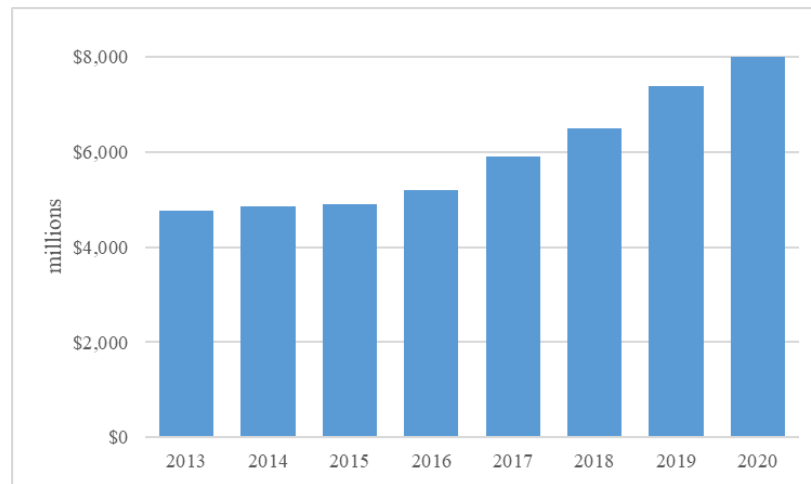
¹²⁰ Mulligan, Mark, “How Music Publishers Are Driving a Full Stack Revolution,” *Midia Research*, October 14, 2019, available at <https://www.midiaresearch.com/blog/how-music-publishers-are-driving-a-full-stack-revolution> (accessed October 7, 2021).

¹²¹ “The Show Must Go On,” *Goldman Sachs Equity Research*, May 14, 2020, p. 32 (emphasis original).

¹²² Segal Testimony, ¶ 55.

¹²³ “The Show Must Go On,” *Goldman Sachs Equity Research*, May 14, 2020, p. 32.

Figure 6: U.S. Record Label Industry Revenue and Growth, 2013-2020¹²⁴



130. This revenue growth is concentrated in the hands of just a few labels.¹²⁵ For example, the report notes that “The top 4 record labels drove 82% of music listening on Spotify last year, according to Spotify, which implies they would therefore receive a disproportionately higher share of Spotify’s royalty pool.”¹²⁶
131. In short, my review finds strong growth in the U.S. recorded music industry revenues and streaming music industry revenues in recent years. Since 2015, the year that Apple Music launched, both the overall recorded music industry and the streaming industry, in particular, have grown at a rapid pace. Both licensors – record labels and publishers – have shared the fruits of this growth, experiencing sustained growth.

¹²⁴ Source: RIAA Year-End Revenue Reports. The figure shows Wholesale Revenues. “According to the RIAA, the wholesale value of music is the ‘better metric of the revenues that are going to music labels for sales and listening’. In other terms, wholesale value takes into account all revenues paid to record labels — from physical sales, streaming and other sources.” Sacquet, Maud, “Value Growth and the Music Industry: The Untold Story of Digital Success,” *Computer & Communications Industry Association*, available at <https://www.cciainet.org/wp-content/uploads/2017/10/CCIA-Paper-Value-Growth-2017.pdf> (accessed on October 11, 2021).

¹²⁵ “The Show Must Go On,” *Goldman Sachs Equity Research*, May 14, 2020, p. 32, noting “The key streaming segment, which now accounts for the majority of recorded revenue, will however remain resilient in our view as discussed in the earlier section.”

¹²⁶ “The Show Must Go On,” *Goldman Sachs Equity Research*, May 14, 2020, p. 38.

132. Furthermore, I find that there is significant competition for music streaming services. Customers have a range of service providers and subscription tiers to consider at various price points.

III. ECONOMIC FRAMEWORK FOR ESTIMATING ROYALTY RATES

133. I understand that the terms and rates for interactive streaming mechanical royalty payments were previously determined by the CRB under four statutory objectives known as the 801(b) factors.¹²⁷

134. I also understand that the terms and rates for interactive streaming mechanical royalty payments under the *Phono IV* proceedings are to be determined under a new statutory standard the “willing buyer / willing seller” standard. I understand that the Judges have used the same WBWS standard in both the *Web IV* and *Web V* proceedings that determined the royalty rates for the digital performance of sound recordings by noninteractive streaming services.¹²⁸ That is, in the *Web* proceedings, under the WBWS standard, the Judges found that royalties should be determined by **willing** buyers and **willing** sellers in a hypothetical negotiation in which neither side has overwhelming market power.¹²⁹

¹²⁷ 17 U.S.C. § 801(b)(1). These factors are: (i) To maximize the availability of creative works to the public; (ii) To afford the copyright owner a fair return for his or her creative work and the copyright user a fair income under existing economic conditions; (iii) To reflect the relative roles of the copyright owner and the copyright user in the product made available to the public with respect to the relative creative contribution, technological contribution, capital investment, cost, risk, and contribution to the opening of new markets for creative expression and media for their communication; and (iv) to minimize any disruptive impact on the structure of the industries involved and on generally prevailing industry practices.

¹²⁸ “Determination,” *Determination of Royalty Rates and Terms for Ephemeral Recording and Webcasting Digital Performance of Sound Recordings (Web IV)*, Docket No. 14-CRB-0001-WR (2016-2020), issued December 16, 2015 (henceforth, “*Web IV* Determination”); and “Final Determination,” *Determination of Rates and Terms for Digital Performance of Sound Recordings and Making of Ephemeral Copies to Facilitate Those Performances (Web V)*, Docket No. 19-CRB-0005-WR (2021-2025), issued July 22, 2021 (henceforth, “*Web V* Determination”).

¹²⁹ The *Web IV* Determination also noted that “The Judges ‘shall base their decision on economic, competitive[,], and programming information presented by the parties....’ Within these categories, the Judges’ determination shall account for (1) whether the Internet service substitutes for or promotes the copyright owner’s other streams of revenue from the sound recording, and (2) the relative roles and contributions of the copyright owner and the service, including creative, technological, and financial contributions, and risk assumption. The Judges may consider rates and terms of comparable services and comparable circumstances under voluntary, negotiated license agreements.” *Web IV* Determination at 2 (internal citations omitted).

135. Additionally, under the WBWS standard, I understand that the Judges have sought to eliminate the influence of complementary oligopoly power on the statutory royalty rate. *See, e.g., Web IV Determination*, noting that “[I]t is precisely this complementary oligopoly value that the Judges are declining to include in the statutory rate[.]”¹³⁰ *See also, Web IV Determination*, noting that “[t]he Judges ... will not allow such complementary oligopoly power to be incorporated into the statutory rate.”¹³¹
136. I further understand that the D.C. Circuit reviewed the *Web IV* determination and agreed with the Judges’ statement that “neither sellers nor buyers can be said to be ‘willing’ partners to an agreement if they are coerced to agree to a price through the exercise of overwhelming market power.”¹³²
137. Thus, from an economic perspective, in my opinion, the WBWS standard introduces two critical changes relative to the prior 801(b) factor-based rate determination:
- The royalty rates should reflect the negotiations between relevant buyers and sellers **only**,¹³³ and
 - While the rates are likely to reflect the relative bargaining strength of the two sides, **neither side** has monopoly power (or supra monopoly power through “complementary oligopoly”) to set the rates.

IV. MECHANICAL ROYALTY RATES UNDER THE *PHONO II* SETTLEMENT

138. I understand that, while the Judges are required to determine royalty rates and terms for mechanical rights licensed under Section 115, the Copyright Act prefers negotiated settlements.¹³⁴

¹³⁰ *Web IV Determination* at 40.

¹³¹ *Web IV Determination* at n. 140.

¹³² Opinion in *SoundExchange v. Copyright Royalty Board*, No. 16-1159 (D.C. Cir. 2018) at 23.

¹³³ *See, e.g., Determination of Rates and Terms for Preexisting Subscription Services and Satellite Digital Audio Radio Services*, 78 Fed. Reg. 23058 (Apr. 17, 2013) (“[A] benchmark market should involve the **same** buyers and sellers for the same rights.”) (emphasis added); *Web IV Determination* at 49-50 (noting the “Willing buyer and willing seller test,” “**Same** parties test,” ...) (emphasis added); *Web V Determination* at 255, 261 (noting “the same types of buyers, the **same** sellers ...”) (emphasis added).

¹³⁴ “Final Determination,” *Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)*, Docket No. 16-CRB-0003-PR (2018-2022), issued November 5, 2018 (henceforth, “*Phono III Determination*”) at 3.

139. In 2012, under the *Phono II* Settlement, the Services and the Copyright Owners reached a settlement on rates and terms of mechanical licenses for years 2013 to 2017 for Streaming Products, and the Judges accepted those rates in 2013.¹³⁵ The *Phono II* Settlement for Streaming Products was finalized under the statutory standards that consider four 801(b) factors. The rates and terms for Streaming Products are currently determined using the *Phono II* Settlement, as the related *Phono III* determination (again under 801(b) factors) was remanded on appeal.¹³⁶
140. While the formula for royalty determination varies across different Streaming Products, all products use a similar rate structure.¹³⁷ In general terms, royalty rates for mechanical licenses are an “all-in” rate derived from a “greater-of” rate structure with two prongs:¹³⁸
- A “Revenue” prong, which is a fixed percentage (“Headline Revenue Rate”) of the total revenue generated by the relevant Streaming Product; and
 - A Total Cost of Content prong, which is a fixed percentage (“Headline TCC Rate”) of the total cost of content associated with the relevant Streaming Product, where TCC refers to the royalty payments made by the Services to record companies for the sound recordings played by users of the relevant Streaming Product.¹³⁹

¹³⁵ *Phono III* Determination at 4. See also “Motion to Adopt Settlement,” *Adjustment or Determination of Compulsory License Rates for Making and Distributing Phonorecords*, Docket No. 2011-3 CRB Phonorecords II, April 10, 2012 (henceforth, “*Phono II* Rates and Terms”). The 2012 settlement also rolled forward the rates and terms on physical phonorecords, PDDs, and ringtones from a 2008 settlement, accepted by the Judges in 2009 as part of the *Phonorecords I* proceedings. *Phono III* Determination at 4; and *Phono II* Rates and Terms.

At the time of the *Phono II* Settlement, interactive streaming and limited downloads were covered under Subpart B of the regulations, and limited offerings, mixed service bundles, music bundles, paid locker services, and purchased content locker services were covered under Subpart C. Currently, all of the Streaming Products are covered under Subpart C of the regulations. *Phono III* Determination at 4.

¹³⁶ Opinion in *Johnson v. Copyright Royalty Board*, No. 19-1028 (D.C. Cir. 2020).

¹³⁷ See **Exhibit 5** containing HFA *Phono II* Rate Charts for Streaming Products.

¹³⁸ HFA *Phono II* Rate Charts.

¹³⁹ The Headline TCC Rate depends on whether the sound recording licenses that the record companies grant to the Services are pass-through or not. Lower percentages apply if the record companies’ revenue includes revenue to be “passed through” by them to pay mechanical license royalties. See HFA *Phono II* Rate Charts. I understand they typically are not pass-through for interactive streaming.

141. The greater-of structure means that the all-in rate is the greater of two rates, one produced by the Revenue prong and the other by the TCC prong.¹⁴⁰ The rate is called an all-in rate because the rate determines the total musical works royalty pool, and then performance royalties paid to publishers and songwriters (via PROs or otherwise) are deducted from that total pool to determine the mechanical license royalty pool.

142. Additionally, depending on the product, the rate structure has one or more of the following:

- A “TCC cap” that puts an upper limit on the TCC prong, based on a fixed per subscriber minimum;¹⁴¹
- An “All-In Minimum” that puts a floor on the all-in rate;¹⁴² and
- A “Mechanical Minimum” or “Mechanical Floor” that puts a floor on the mechanical royalty rate payable by the Services.¹⁴³

¹⁴⁰ The greater-of evaluation of the two prongs is not based on their respective headline rates; rather, it is based on the all-in dollar royalties each prong produces. However, because these dollar royalties are ultimately based on the same underlying revenue, they can be expressed as comparable rates of that revenue.

¹⁴¹ Under the *Phono II* Settlement, there are three interactive streaming products with a TCC cap. These are:

- i. Standalone Portable Subscriptions - Mixed Use (*i.e.*, subscription services accessible through portable devices such as mobile phones) – \$0.80 per subscriber per month;
- ii. Standalone Non-portable Subscriptions - Streaming Only (*i.e.*, subscription services accessible on desktop computers that only play music when a live internet connection exists) – \$0.50 per subscriber per month; and
- iii. Standalone Non-portable Subscriptions - Mixed Use (*i.e.*, subscription services accessible on desktop computers that play music whether the computer is online or offline) – \$0.50 per subscriber per month.

See HFA *Phono II* Rate Charts.

¹⁴² Under the *Phono II* Settlement, there are two interactive streaming products with an All-in Minimum. These are:

- i. Paid Locker Services (*i.e.*, services that provide continuous access to internet connected devices to recordings previously purchased by the end user) – \$0.17 per subscriber per month; and
- ii. Limited Offerings (*i.e.*, subscription services that offer a very limited catalogue of music or services that stream pre-programmed playlists) – \$0.18 per subscriber per month.

See HFA *Phono II* Rate Charts.

¹⁴³ Under the *Phono II* Settlement, there are four interactive streaming products with a Mechanical Minimum. These are:

- i. Standalone Portable Subscriptions - Mixed Use – \$0.50 per subscriber per month;

143. Relatedly, I note that there are instances when a TCC cap effectively becomes an All-In Minimum. This is because the greater-of rate structure ensures that when either the Headline TCC Rate or the Effective Label Rate is too high,¹⁴⁴ the all-in rate implied by the two rates becomes greater than the associated TCC cap, and the TCC cap becomes the floor for the all-in rate.

144. In other words, the all-in rate (subject to an All-In Minimum, if any) is determined as follows:

- If the Revenue prong is operative, the all-in rate equals the product of Headline Revenue Rate and related music service revenue; or
- If the TCC prong is operative, the all-in rate (subject to TCC cap) equals the product of a) Headline TCC Rate, b) the Effective Label Rate paid by the service to record labels, and c) music service revenue to which the Effective Label Rate applies.

145. The mechanical royalty (subject to a Mechanical Floor, if any) equals the all-in rate minus performance royalties.

146. Below, I demonstrate the calculations associated with the determination of royalty rates for three Streaming Products to provide examples of rate structures with different minima. The three products I describe are:¹⁴⁵

- Standalone Portable Subscription Services (Mixed Use), which have a capped TCC prong and a Mechanical Minimum;
- Bundled Subscription Services, which have only a Mechanical Minimum; and

-
- ii. Standalone Non-portable Subscriptions - Streaming – \$0.15 per subscriber per month;
 - iii. Standalone Non-portable Subscriptions - Mixed Use – \$0.30 per subscriber per month; and
 - iv. Bundled Subscription Services – \$0.25 per active subscriber per month.

See HFA *Phono II* Rate Charts.

¹⁴⁴ TCC is determined by the agreements between record labels and the Services. Typically, TCC is the greater of either a fixed percentage (“Headline Label Rate”) of the relevant Streaming Product’s revenue or a per subscriber dollar minimum that usually equals the Headline Label Rate applied to the standard subscription price of the Streaming Product. I refer to the sound recording royalty payments received by record companies as a percentage of the Streaming Product’s revenue as the “Effective Label Rate.”

¹⁴⁵ Some other services covered by the *Phono II* Settlement are: (i) Standalone Non-portable Subscriptions - Streaming; (ii) Standalone Non-portable Subscriptions - Mixed Use; (iii) Purchased Content Locker Services; (iv) Mixed Service Bundles; (v) Music Bundles; (vi) Limited Offerings; and (vii) Free Non-Subscription / Ad-Supported Services. See HFA *Phono II* Rate Charts.

- Paid Locker Services, which have an All-In Minimum.

A. Standalone Portable Subscriptions (Mixed Use) Mechanical Royalty Rates Determination Under the *Phono II* Settlement

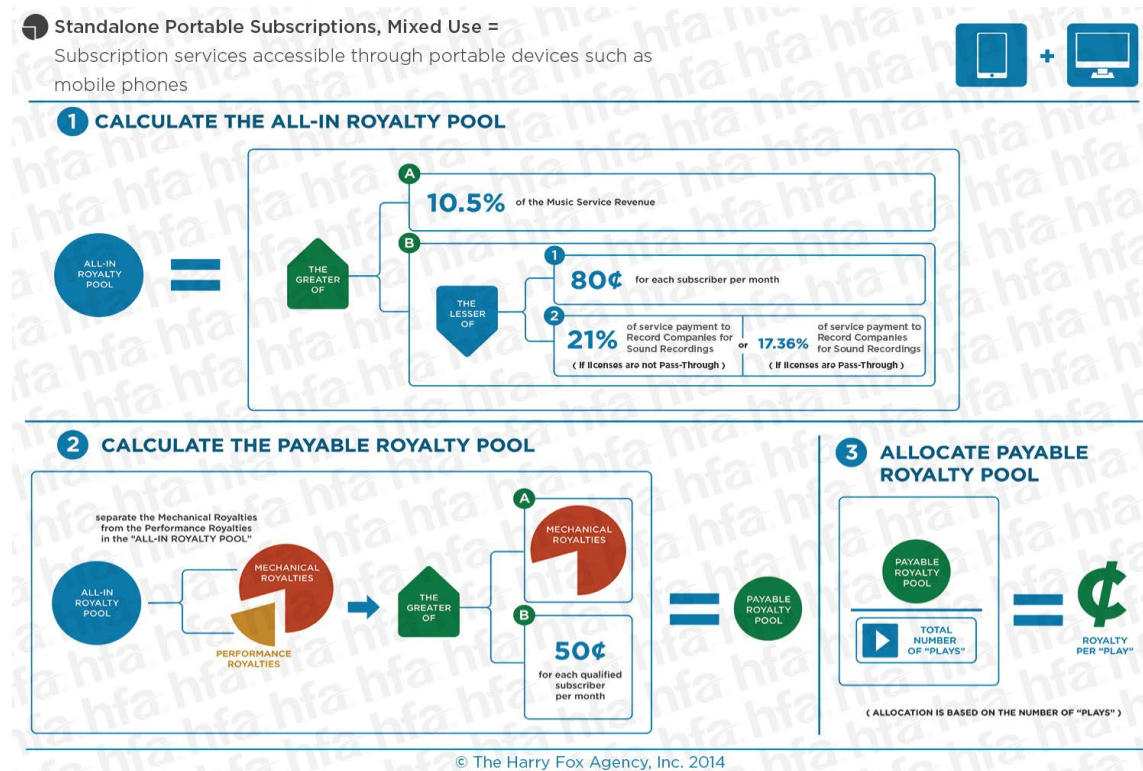
147. Standalone Portable Subscriptions (Mixed Use) include subscription services accessible through portable devices such as mobile phones. The formula for mechanical royalties for this product appears in **Figure 7**. This formula applies to most paid-subscriber services, and presents the various ways to determine mechanical royalty rates:

1. Calculate the all-in royalty pool as the greater of (A) 10.5% of music service revenue (Step 1A)¹⁴⁶ and (B) the lesser of (i) 21% (if licenses are not pass-through) or 17.36% (if licenses are pass-through) of TCC and (ii) \$0.80 per subscriber per month (Step 1B).
2. Calculate the payable mechanical royalty pool as the greater of (A) the all-in royalty pool from Step 1 less performance royalties and (B) the royalty pool based on \$0.50 per subscriber per month (Step 2).
3. Allocate the payable mechanical royalty pool by dividing the royalties from Step 2 by the total number of plays to determine the mechanical royalty per play (Step 3).¹⁴⁷

¹⁴⁶ Step numbers based on the chart, not necessarily the step numbers identified in the statute.

¹⁴⁷ HFA *Phono II* Rate Charts, “Standalone Portable Subscriptions, Mixed Use.”

Figure 7: Standalone Portable Subscriptions (Mixed Use) Mechanical Royalty Rates Determination Under the *Phono II* Settlement¹⁴⁸



148. To illustrate this calculation, consider the example of an Apple Music individual plan, offered at \$10 per subscriber per month.¹⁴⁹ For purposes of this example, I assume the Effective Label Rate is 55% and the license is non-pass through. To calculate mechanical royalties, we first have the following two prongs:

- Revenue prong: 10.5% of service revenue, which equals \$1.05 ($.105 \times \10) per subscriber per month; and
- TCC prong: lesser of (i) 21% of TCC, which equals 55% (Effective Label Rate) times \$10 (service price) times 21% (non-pass through TCC rate), or \$1.16 ($.55 \times \$10 \times .21$), and (ii) \$0.80 per subscriber per month.

149. Because the TCC prong is capped at \$0.80, the all-in rate under the greater of the rate structure is \$1.05 per subscriber per month. Notably, if the TCC prong were uncapped, as

¹⁴⁸ Source: HFA *Phono II* Rate Charts, "Standalone Portable Subscriptions, Mixed Use."

¹⁴⁹ The plan is currently offered at \$9.99. I round the subscription fee to \$10 for ease of illustration. See "Apple Music," *Apple*, available at <https://www.apple.com/apple-music/> (accessed on September 22, 2021).

was proposed under *Phono III*, the all-in rate would be based on the TCC prong and would equal \$1.16 per subscriber per month, as that is greater than \$1.05 per subscriber per month produced by the Revenue prong.¹⁵⁰ In fact, in this example, as long as the Effective Label Rate is greater than 50% (*i.e.*, \$5 per subscriber per month) and the TCC prong is uncapped, the all-in rate based on the TCC prong will always be greater than \$1.05 per subscriber per month (*i.e.*, the rate based on the Revenue prong) and therefore determinative of the all-in rate of this product. Under this scenario, the all-in rate would essentially reflect the bargaining between the record labels and the Services, including the impact of the labels' market power (which has been well-recognized in prior proceedings and is discussed in more detail below).

150. Further, if the TCC prong is capped at \$0.80, as is the case in *Phono II* Settlement, the cap will effectively act as an All-In Minimum.¹⁵¹

151. The mechanical royalty pool is then the greater of (A) the all-in pool just calculated (*i.e.*, \$1.05 per subscriber per month, less performance royalties), and (B) the \$0.50 per subscriber minimum. In this example, if performance royalties are less than or equal to \$0.55 per-subscriber per month, prong (A) determines the mechanical royalty pool. If performance royalties exceed \$0.55 per subscriber per month, the mechanical royalty will be simply \$0.50 per subscriber per month. For example, if performance royalties are \$0.60 per subscriber per month, the mechanical royalties based on the all-in rate of \$1.05 will be \$0.45 per subscriber per month, which is less than the Mechanical Minimum of \$0.50 per subscriber per month for this product, and therefore, the applicable mechanical royalty rate will be \$0.50 per subscriber per month.

152. It is worth noting that if the per subscriber mechanical floor applies, the effective rate the service pays for performance plus mechanical royalties will be greater than the 10.5%

¹⁵⁰ *Phono III* Determination at 35-36.

¹⁵¹ In this example, the TCC cap will be operative as long as the Effective Label Rate is greater than 38.1%, which translates into a TCC prong-based rate of \$0.8001 ($.21 * .381 * \10). **RESTRICTED**
[REDACTED] the TCC prong effectively translates into an All-In Minimum for Apple under the *Phono II* Settlement for this particular product.

Headline Revenue Rate. As a result,

RESTRICTED

¹⁵²

153. Once the mechanical royalty pool is determined, the royalty per “play” is then calculated by dividing the resulting payable royalty pool by the total number of “plays.”

B. Bundled Subscription Services Mechanical Royalty Rates Determination Under the *Phono II* Settlement

154. Bundled Subscription Services include services sold together with another product or service (such as a mobile phone or a video streaming application). The formula for mechanical royalties for this product appears in **Figure 8**.

155. The all-in royalty pool for Bundled Subscription Services is the greater of (A) 10.5% of music service revenue (Step 1A)¹⁵³ and (B) 21% (if licenses are not pass-through) or 17.36% (if licenses are pass-through) of TCC (Step 1B).

156. The calculation is almost the same as the formula for Standalone Portable Subscriptions (Mixed Use) with the following important differences:¹⁵⁴

- For the Revenue prong, music service revenue needs to be determined because the bundle contains non-Section 115 products;
- There is no cap in the TCC prong; and
- The Mechanical Minimum is lower (\$0.25 instead of \$0.50) and only applied to active subscribers.¹⁵⁵

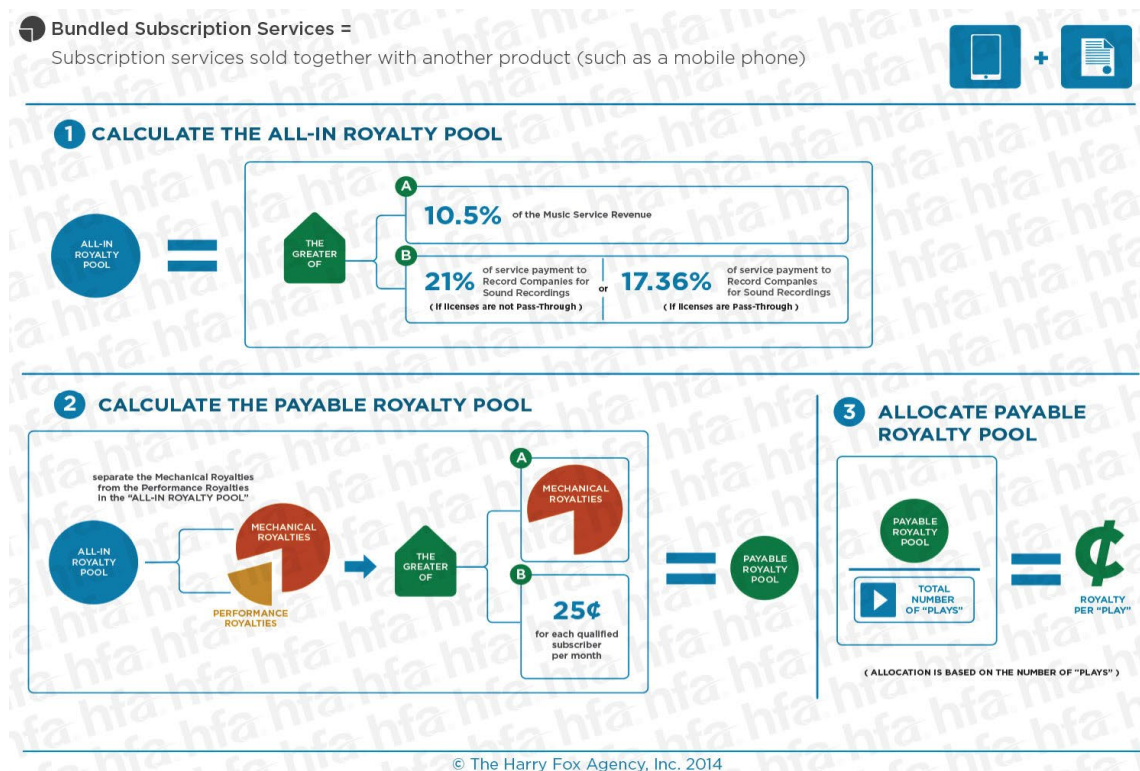
¹⁵² e.g., Segal Testimony, ¶ 55-56.

¹⁵³ Step numbers based on the chart, not necessarily the step numbers identified in the statute.

¹⁵⁴ HFA *Phono II* Rate Charts, “Standalone Portable Subscriptions, Mixed Use,” and “Bundled Subscription Services.”

¹⁵⁵ An “active subscriber” is a subscriber that makes at least one play of a licensed musical work in the respective month. *Phono II* Rates and Terms at §385.13(a)(4).

Figure 8: Bundled Subscription Services Mechanical Royalty Rates Determination Under the *Phono II* Settlement¹⁵⁶



157. To illustrate this calculation, I present a hypothetical example based on Apple One (a four product – including music – individual plan), which Apple offers for \$14.95 per month.¹⁵⁷ Under the *Phono II* Settlement, music service revenue is calculated as:

*... the revenue recognized from end users for the bundle less the standalone published price for end users for each of the other component(s) of the bundle; provided that, if there is no such standalone published price for a component of the bundle, then the average standalone published price for end users for the most closely comparable product or service in the U.S. shall be used or, if more than one such comparable exists, the average of such standalone prices for such comparables shall be used.*¹⁵⁸

¹⁵⁶ Source: HFA *Phono II* Rate Charts, "Bundled Subscription Services."

¹⁵⁷ For \$14.95 per month, an individual subscription offers Apple Music, Apple TV+, Apple Arcade, iCloud+ with 50GB. See "Apple One," *Apple*, available at <https://www.apple.com/apple-one/> (accessed on September 22, 2021).

¹⁵⁸ *Phono II* Rates and Terms at §385.11, "Service Revenue" definition, (5) (emphasis added).

158. Therefore, the revenue eligible for royalty payment is \$3.98 per subscriber per month calculated as \$14.95 (the price of the bundle) less \$10.97 (the sum of the standalone prices of Apple TV+ (\$4.99), Apple Arcade (\$4.99), and iCloud+ with 50GB (\$0.99)).¹⁵⁹

159. The rest of the calculation will follow the same approach as outlined in the example for Standalone Portable Subscriptions (Mixed Use) (*i.e.*, Apple Music), with the difference that the TCC prong is no longer capped and the Mechanical Minimum is \$0.25 per subscriber instead of \$0.50 per subscriber and only applied to active subscribers. The mechanical royalty per “play” is then calculated by dividing the resulting payable royalty pool by the total number of “plays.” As there is no TCC cap, the all-rate will be determined by the TCC prong when the Effective Label Rate is so high that the implied all-in rate from the TCC prong is higher than the all-in rate from the Revenue prong. In this situation, the all-in rate would essentially reflect the relative bargaining between the record labels and the Services, including the impact of the labels’ market power.

160. To elaborate on this calculation, **RESTRICTED**

[REDACTED]

- **RESTRICTED**
- **RESTRICTED**
- **RESTRICTED**

¹⁵⁹ “Apple One,” *Apple*, available at <https://www.apple.com/apple-one/> (accessed on September 22, 2021).

¹⁶⁰ The total standalone retail price of the bundle’s components is \$20.96 (= \$9.99 for Apple Music + \$4.99 for Apple TV+ + \$4.99 for Apple Arcade + \$0.99 for iCloud (50GB)). Music’s share of this total is 47.7%.

¹⁶¹ APL-PHONO4_00001680 **RESTRICTED**.

161. Once the TCC is determined, it is imported over to the mechanical royalty calculation in the TCC prong, and the mechanical royalty calculation proceeds as follows:

- Revenue prong: 10.5% of \$3.98 (the revenue from the bundle after the value of the non-music services is subtracted, as discussed above) equals \$0.42.
- TCC prong: 21.0% (for non-pass through licenses) of the TCC calculated above of **RESTRICTED** equals **RESTRICTED**
- Greater-of determination: Because **RESTRICTED** \$0.42, and there is no TCC cap, **RESTRICTED**
- Mechanical Floor determination: Given the Mechanical Floor of \$0.25 for Bundled Subscription Services, as long as performance royalties are **RESTRICTED**

C. Paid Locker Services Mechanical Royalty Rates Determination Under the *Phono II* Settlement

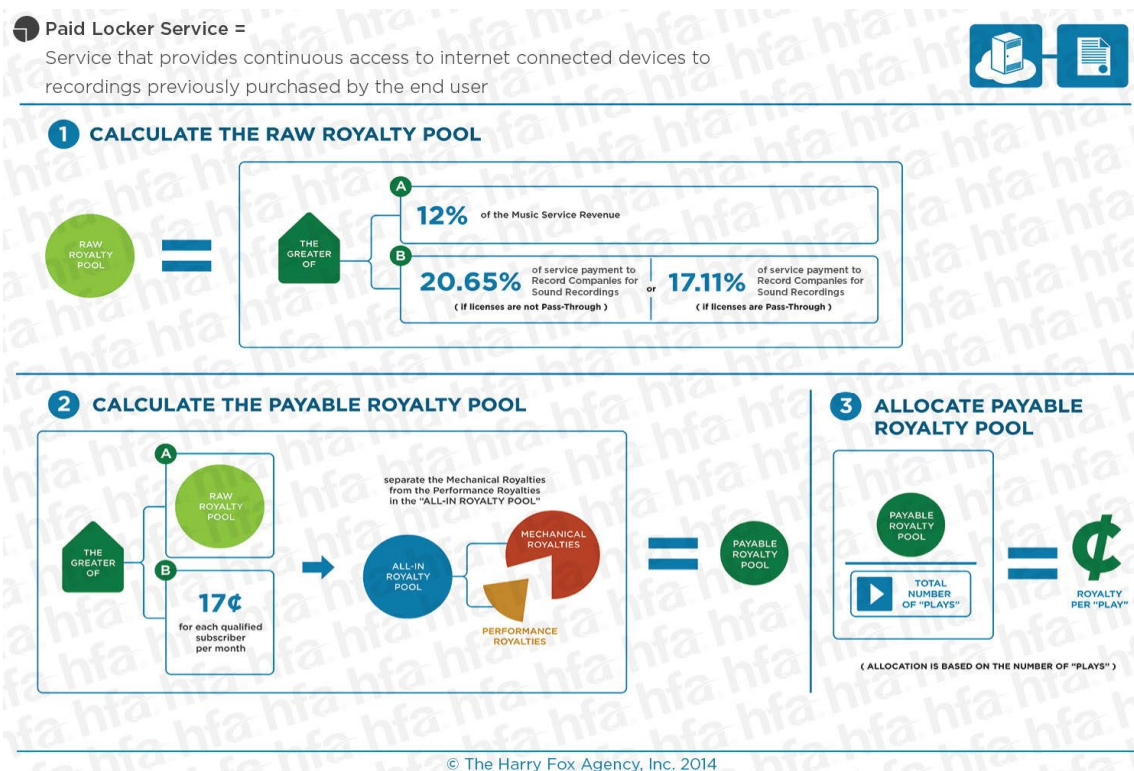
162. Paid locker services provide internet-connected devices access to recordings previously purchased by the user for a subscription fee. The formula used to calculate the associated royalties for paid locker services is presented in **Figure 9**. The raw royalty pool for paid locker services is the greater of (A) 12.0% of music service revenue (Step 1A)¹⁶² and (B) 20.65% (if licenses are not pass-through) or 17.11% (if licenses are pass-through) of TCC (Step 1B).¹⁶³

163. The payable royalty pool for paid locker services is then determined by, first, selecting the greater of (A) the raw royalty pool (Step 2A) and (B) \$0.17 per subscriber per month (Step 2B) and, second, subtracting performance royalties. The payable royalty pool is then divided by the total number of “plays” to get the “per play” mechanical royalty (Step 3).

¹⁶² Step numbers based on the chart, not necessarily the step numbers identified in the statute.

¹⁶³ HFA *Phono II* Rate Charts, “Paid Locker Services.”

Figure 9: Paid Locker Services Mechanical Royalty Rates Determination Under the Phono II Settlement¹⁶⁴



164. The calculation is almost the same as the formula for Bundled Subscription Services discussed above with the following important differences:

- For the Revenue prong, the headline rate is higher (12.0% for Paid Locker Services vs. 10.5% for Bundled Subscription Services);
- For the TCC prong, the Headline TCC Rate is slightly lower (*i.e.*, 20.65% for Paid Locker Services vs. 21% for Bundled Subscription Services for not pass-through licenses, and 17.11% for Paid Locker Services vs. 17.36% for Bundled Subscription Services for pass-through licenses); and
- The Mechanical Minimum is replaced by an All-In Minimum of \$0.17 per subscriber per month.

¹⁶⁴ Source: HFA *Phono II* Rate Charts, "Paid Locker Services."

V. THE *PHONO II* SETTLEMENT RATE STRUCTURE WITHOUT THE TCC PRONG WOULD BE AN APPROPRIATE RATE STRUCTURE FOR THE PRODUCTS AT ISSUE UNDER THE WBWS STANDARD

165. The determination of mechanical royalty rates for the Streaming Products in *Phono IV*, whether through a settlement or statutory proceedings, requires, among other things, an analysis of the appropriate royalty rate structure under the new WBWS standard. In particular, can all or part of the royalty rate structures accepted under the 801(b) factors standard be used under the new WBWS standard?
166. In this section, I perform analyses to identify a rate structure that is consistent with the new WBWS standard.¹⁶⁵ I find that the *Phono II* Settlement rate structure **minus the TCC prong**¹⁶⁶ (*i.e.*, a revenue-based all-in rate subject to either an All-In Minimum or Mechanical Minimum or both) is consistent with the new WBWS standard.
167. *First*, I note that, as part of *Phono IV*, the Copyright Owners and record labels recently negotiated under the new WBWS standard the rates and terms for Subpart B products (*i.e.*, physical phonorecords, PDDs, and ringtones), and continued the rate structure and rates that they had agreed to under the 801(b) factors in three previous settlements, including the *Phono II* Settlement (the *Phono IV* Subpart B Settlement). I thus infer from the “revealed preference” of the Copyright Owners in the *Phono IV* Subpart B Settlement, that the *Phono II* Settlement rate structures provide *a reasonable starting point* for determining rate structures consistent with the WBWS standard.¹⁶⁷

¹⁶⁵ To be clear, there could be other rate structures that are also consistent with the WBWS standard. I am not opining that the rate structure I propose is the *only* structure consistent with the WBWS standard.

¹⁶⁶ As I explained earlier in §IV, the *Phono II* rate structure has a TCC prong, which determines all-in rate as a fixed percentage (*i.e.*, Headline TCC Rate) of the total cost of content associated with the relevant Streaming Product, where TCC refers to the royalty payments made by the Services to record labels.

Sometimes the TCC prong in rate structure has an associated TCC cap. As I demonstrated in § IV.A, when binding, the TCC cap is equivalent to an All-In Minimum. Instead of this complex and implicit All-In Minimum, I instead propose a simpler structure that has either an explicit All-In Minimum or Mechanical Minimum or both.

¹⁶⁷ As I explain in § V.A, the rate structures for physical phonorecords, PDDs, and ringtones do not have a TCC prong because the licensees for those products are the record labels.

168. *Second*, I explain that, in my opinion, from an economic perspective, the *Phono II* Settlement rate structure for Streaming Products minus the TCC prong would result in a rate structure for Streaming Products that is consistent with the new WBWS standard.
169. This rate structure (*i.e.*, a structure without TCC) is appropriate for determining rates for the 2023-2027 rate period for all Streaming Products because the reasons for excluding TCC (discussed below) apply equally to all the products at issue in *Phono IV*.
170. As explained in § III, from an economic perspective, I consider the WBWS standard to mean that the royalty rates should reflect hypothetical negotiations between relevant buyers and sellers **only**. However, as I explain in detail later, the TCC prong creates the potential of setting royalty rates based on negotiations, not between the relevant buyers and sellers, but between buyers and an entirely different set of sellers.
171. In particular, I explain that, when operative, the TCC prong would lead to an all-in rate that is inconsistent with the WBWS standard because: (1) TCC is based on negotiations in which the owners of the mechanical rights (publishers and/or songwriters) are not involved at all; (2) the royalty rates that determine the TCC are negotiated in a market where the Majors enjoy “complementary oligopoly power,” a power “that the Judges [have] declin[ed] to include in the statutory rate” in previous proceedings;¹⁶⁸ and (3) the balance of bargaining power in that market (between the Majors and the Services) cannot be established with sufficient certainty to allow for a reliable calculation of WBWS musical works rates via sound recording rates.
172. Additionally, I note that, if Effective Label Rates (paid by the Services to record labels) are *not* high enough to trigger the TCC prong, whether capped or uncapped, the *Phono II* Settlement rate structures for Streaming Products effectively reduce to revenue-based all-in rates subject to Mechanical Floors. And, if Effective Label Rates *are* high enough to trigger the TCC cap, if any, the *Phono II* Settlement rate structures for Streaming Products effectively reduce to revenue-based all-in rates subject to All-In Minima (*i.e.*, the TCC cap) and Mechanical Floors.¹⁶⁹

¹⁶⁸ *Web IV* Determination at 40.

¹⁶⁹ See § IV.A for an illustration of this point.

173. In short, depending on Effective Label Rates, the TCC prong in the *Phono II* Settlement rate structure for Streaming Products (a) produces rates that are inconsistent with the WBWS standard; or (b) acts as an All-in Minimum; or (c) is redundant.

174. The removal of the TCC prong from the rate structure will result in all-in rates being determined by revenue earned by the Services for the Streaming Products, subject to various minima; a structure similar to the one proposed by Apple. As the Headline Revenue Rate in a revenue-based structure would be based on hypothetical negotiations between the Copyright Owners and the Services alone, in my opinion, a revenue-based rate structure would be consistent with the WBWS standard.

175. *Third*, [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED].

176. *Fourth*, the concerns purportedly addressed by the TCC prong in the *Phono II* settlement have since been alleviated or can be alleviated through minima in rate structures without creating inconsistency with the WBWS standard.

177. To the extent that the Copyright Owners negotiated for the TCC prong in the *Phono II* Settlement as protection against the uncertainty of a relatively nascent industry, that justification is largely moot, as the interactive streaming market is no longer a nascent industry.

178. Similarly, to the extent that the TCC prong could be justified as a protection against revenue deferral, All-In Minima and/or Mechanical Minima can provide that protection while being consistent with the WBWS standard.

179. I then explain why all-in rates should be preserved in the rate structure I propose.

180. *Finally*, I provide [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

RESTRICTED

181. In Exhibit 6, RESTRICTED

182. RESTRICTED, in my opinion, confirm that the rate structure I propose is a structure consistent with the WBWS standard from an economic perspective.

A. The *Phono II* Settlement Rate Structure is A Reasonable Starting Point to Determine the Appropriate Rate Structure under the WBWS Standard

183. The *Phono II* Settlement rate structure for Streaming Products is a reasonable starting point to determine a rate structure consistent with the WBWS standard due to at least the following reasons.¹⁷⁰

184. First, recent negotiations (*i.e.*, under *Phono IV*) between the Copyright Owners and the Majors for other products (*i.e.*, physical phonorecords, PDDs, and ringtones) against the backdrop of the WBWS standard resulted in the parties adopting the same rate structure and rates that they agreed to in the *Phono II* Settlement.¹⁷¹

¹⁷⁰ Across multiple proceedings, the Judges have relied on similar factors to those described below when evaluating the appropriateness of different benchmarks. See, *e.g.*, *Determination of Rates and Terms for Preexisting Subscription Services and Satellite Digital Audio Radio Services*, 78 Fed. Reg. 23058 (Apr. 17, 2013) (“[A] benchmark market should involve the same buyers and sellers for the same rights.”); *Web IV* Determination at 49-50 (noting the “Willing buyer and willing seller test,” “Same parties test,” “Absence of Statutory license test,” and “Same rights test”); *Web V* Determination at 255, 261 (noting “the same types of buyers, the same sellers, the same works, the same rights, and the same license term”); *Web IV* Determination at 25 (“The Judges hold in this determination, as they have held consistently in the past, that the use of benchmarks ‘bakes-in’ the contracting parties’ expectations regarding the promotional and substitutional effects of the agreement.”).

¹⁷¹ As I explain in § IV.A, the rate structures for these products do not have a TCC prong because the licensees for those products are the record labels.

185. *Second*, the Copyright Owners’ potential “complementary oligopoly power” in the *Phono II* Settlement for Streaming Products was constrained.

186. Additional reasons include:¹⁷²

- iii. There is a substantial overlap between the licensors in the *Phono II* Settlement for Streaming Products and the Copyright Owners in *Phono IV*.¹⁷³
- iv. The licensees in the *Phono II* Settlement for Streaming Products and the Services in *Phono IV* are similarly situated, *i.e.*, services offering or interested in offering interactive streaming products.
- v. The *Phono II* Settlement for Streaming Products covered the same services and offerings as those at issue in *Phono IV*.
- vi. The *Phono II* Settlement for Streaming Products regarded the same rights – for mechanical reproduction of musical works and notes – as those at issue in *Phono IV*.
- vii. The *Phono II* Settlement for Streaming Products considered the relative roles of the copyright owner and the copyright users; a consideration also required under the WBWS standard.¹⁷⁴

187. Below, I focus on the first two reasons in more detail.

¹⁷² *Also see Phono III* Determination at n. 68 (“[T]he **Judges regularly assume that the parties have ‘baked-in’ the values of promotion and substitution when agreeing to rates.**”) (emphasis added).

Relatedly, I note that, in its discussion of the WBWS standard, the *Web IV* Determination noted, among other things, “the Judges’ determination shall account for ... whether the Internet service substitutes for or promotes the copyright owner’s other streams of revenue from the sound recording,” *Web IV* Determination at 2.

¹⁷³ NMPA and NSAI were parties to the *Phono II* Settlement, among several other musical work copyright holders.

¹⁷⁴ One of the 801(b) factor that applied to the *Phono II* Settlement is “the relative roles of the copyright owner and the copyright user in the product made available to the public with respect to the relative creative contribution, technological contribution, capital investment, cost, risk, and contribution to the opening of new markets for creative expression and media for their communication.” 17 U.S.C. § 801(b)(1).

In discussing the WBWS standard, the *Web IV* Determination noted that, among other things, “the Judges’ determination shall account for ... the relative roles and contributions of the copyright owner and the service, including creative, technological, and financial contributions, and risk assumption.” *Web IV* Determination at 2.

1. Recent Negotiations (Under *Phono IV*) for Royalty Rates for Non-Streaming Products Under the WBWS Standard Resulted in the *Phono II* Settlement Rate Structure for those Products

188. In 2008, the respective licensors (*i.e.*, the Copyright Owners) and licensees (*i.e.*, record labels) at the time settled on the rates and terms for physical phonorecords and PDDs (“*Phono I* Subpart A Settlement”). That settlement maintained the existing rate structure and rates at the time (greater of 9.1c per song or 1.75c per minute, or fraction thereof, of playing time).¹⁷⁵ In 2009, the Judges accepted the *Phono I* Subpart A Settlement under the 801(b) factors standard.¹⁷⁶
189. In 2012, the respective licensors and licensees at the time reached a second settlement on the rates and terms for physical phonorecords, PDDs, and ringtones (“*Phono II* Subpart A Settlement”). This settlement rolled forward the rate structure and rates from the *Phono I* Subpart A Settlement.¹⁷⁷ In 2013, the Judges accepted the *Phono II* Subpart A Settlement, again, under the 801(b) factors standard.¹⁷⁸
190. In 2016, the respective licensors and licensees at the time reached a third settlement on the rates and terms for physical phonorecords, PDDs, and ringtones (“*Phono III* Subpart A Settlement”). This settlement, again, rolled forward the rate structure and rates from the *Phono II* Subpart A Settlement and, by extension, from the *Phono I* Subpart A Settlement for those products.¹⁷⁹ In 2017, the Judges accepted the *Phono III* Subpart A Settlement under the 801(b) factors standard.¹⁸⁰
191. Following the 2017 decision, the standard governing the setting of the mechanical royalty rate for physical phonorecords, PDDs, and ringtones changed from the 801(b) factors to the WBWS standard. In 2021, against the backdrop of this new WBWS standard, the

¹⁷⁵ *Phono III* Determination at 4. These rates and terms were established under a 10-year settlement reached in 1996.

¹⁷⁶ *Phono III* Determination at 4. The Judges also adopted a license rate for ringtones, a newly added Section 115 product at the time, of 24c per ringtone.

¹⁷⁷ *Phono III* Determination at 4.

¹⁷⁸ *Phono III* Determination at 4.

¹⁷⁹ *Phono III* Determination at 5.

¹⁸⁰ *Phono III* Determination at 5.

Copyright Owners and the Majors, the licensors and licensees, respectively, to the mechanical rights to physical phonorecords, PDDs, and ringtones, reached a fourth settlement (*i.e.*, the *Phono IV* Subpart B Settlement) on the rates and terms for those products.¹⁸¹ The settlement rolled forward the rate structure and rates from the *Phono III* Subpart A Settlement and, by extension, from the *Phono II* Subpart A Settlement and the *Phono I* Subpart A Settlement.¹⁸²

192. In other words, even under the new standard, the Copyright Owners settled on the *same rate structure and rates* (for the same rights) that were agreed upon under the old 801(b) factors standard three previous times (*i.e.*, greater of 9.1c per song or 1.75c per minute, or fraction thereof, of playing time).¹⁸³

193. Here, it is worth noting that the *Phono IV* Subpart B Settlement rate structure reflects negotiations between relevant buyers and sellers alone. There is no TCC prong or other prong in the rate structure that is affected by negotiations with different licensors, let alone ones with “complementary oligopoly power.”

194. Thus, from an economic perspective, the “revealed preference” of the Copyright Owners in the *Phono IV* Subpart B Settlement informs me that the *Phono II* Settlement rate structures for Streaming Products are a reasonable starting point for identifying rate structures consistent with the new WBWS standard.

2. The “Shadow” of the Statutory Rate in the *Phono II* Settlement Constrained the Publishers’ “Complementary Oligopoly Power”

195. As I noted in § III in describing the economic framework for the WBWS standard, negotiations in which a party exercises monopoly power (or some parties collectively exercise “complementary oligopoly power”) would be inconsistent with the WBWS standard.

¹⁸¹ At the time of previous settlements, these products were covered under Subpart A of the regulations; they are currently covered under Subpart B of the regulations.

¹⁸² *Phono IV* Subpart B Settlement at 1, 8.

The Judges’ decision on whether to adopt the settlement is currently outstanding.

¹⁸³ All four Subpart A (now, B) settlements include the NMPA and NSAI.

196. “Complementary oligopoly power” is a well-known phenomenon in economics. In 1838, Antoine Cournot analyzed a market in which different firms sold complementary products, all of which had to be bought together by a consumer. Further, each firm was a monopoly producer of its product.¹⁸⁴ In such a market, Cournot explained that the firms would set higher prices than the monopoly prices that those firms would otherwise charge.
197. For example, consider the market for inputs required by a firm for its production. The firm cannot produce its products unless it has access to all the required inputs. If each input is made by a different firm monopolizing that input, the market for inputs will be an oligopoly with perfect complements (*i.e.*, products that are *jointly* “must haves” for buyers). In such a market, the sellers will charge supra-monopoly prices.¹⁸⁵ Supra-monopoly prices result from the fact that a monopoly seller of two complementary products would internalize the fact that lowering the price of one product would increase sales of both products, whereas two sellers that internalize the benefits of only their own respective product have less incentive to lower their prices.¹⁸⁶ Because complementary oligopolists do not compete with one another, they set even higher prices than a monopoly seller of the same products.¹⁸⁷
198. Mechanical rights to musical works are a necessary input to the Services’ offerings, and the three Major Publishers collectively control 57.6% of the global music publishing market.¹⁸⁸ Licensing deals with the Major Publishers are thus “must haves” for the Services, and the Major Publishers could use their “must have” status to (threaten to) “walk away” or “hold out” from negotiations with the Services to extract higher royalties.¹⁸⁹

¹⁸⁴ Cournot, A. *Researches into the Mathematical Principles of the Theory of Wealth*. 1960 [1838]. Augustus M. Kelley.

¹⁸⁵ *Web IV* Determination at 62.

¹⁸⁶ *Web V* Determination at 7.

¹⁸⁷ *Web IV* Determination at 62.

¹⁸⁸ “Money for Something: Music Licensing in the 21st Century,” *Congressional Research Service*, updated February 23, 2021, p. 7.

¹⁸⁹ *See, e.g., Web V* Determination at n. 250 (noting “the ‘abuse of market power’ that arises when a ‘Must Have’ licensor holds-out (or threatens to hold out) during negotiations, in order to earn economic rents arising from the fragmentation of ownership of ‘Must Have’ inputs[.]”).

199. While the Major Publishers would possess complementary oligopoly power due to their “must have” status in normal open market negotiations with Services, the compulsory licensing provides Services with countervailing market power.
200. Compulsory licensing eliminates the “hold-out” power of “must have” licensors.¹⁹⁰ Any threat to “walk away” to extract royalties above the rates that the respective statutory proceeding is likely to establish becomes non-credible.¹⁹¹ Licensors that do walk away will receive royalties equal to the statutory rate decided by the Judges. If both licensors and licensees expect the statutory rate to *not* be inflated by licensors’ complementary oligopoly power, licensees have no incentive to cede to licensors’ threats to hold out, and licensors are aware of this.¹⁹² Here I note that it is reasonable to expect that licensors’ complementary oligopoly power would not inflate the statutory rate because the Judges, in the past, have paid attention to the issue of complementary oligopoly power arising from the Cournot complements problem in setting statutory royalty rates.¹⁹³ As such, rational licensors and licensees can be expected to settle at the rate structure and rates that reflect the likely outcome in the respective statutory proceeding, adjusted for the costs and uncertainty associated with that proceeding.
201. The Judges have recognized that the “so-called shadow [of the statutory rate] imbues licensees with countervailing power, to offset or mitigate the bargaining power of licensors who otherwise have the ability to ‘walk away’ from negotiations and thus decimate the

¹⁹⁰ “[A] purpose of the compulsory license is to prevent the licensor from utilizing or monetizing the ability to ‘walk away’ as a cudgel to obtain a better bargain.” *Phono III* Determination at 33.

¹⁹¹ “[I]t is often the threat that can influence outcomes ... *as long as the threat is credible*.” *Web V* Determination at 23 (emphasis original).

¹⁹² Nevertheless, as I explain in § V.B.1, a statutory rate with a TCC prong can still be inflated by major record labels’ complementary oligopoly power.

¹⁹³ See, e.g., *Web IV* Determination at 40 (“[I]t is precisely this complementary oligopoly value that the Judges are declining to include in the statutory rate[.]”); and *Web IV* Determination at n. 140 (“The Judges ... will not allow such complementary oligopoly power to be incorporated into the statutory rate.”).

licensees' businesses.”¹⁹⁴ In particular, the Judges have made this determination when evaluating the *Phono II* Settlement as a benchmark for rate-setting.¹⁹⁵

202. Therefore, the publishers' complementary oligopoly power in the *Phono II* Settlement was constrained. However, the *Phono II* Settlement did not counterbalance *record labels'* complementary oligopoly power.

B. The TCC Prong in the *Phono II* Settlement Rate Structure for Streaming Products is Inconsistent with the WBWS Standard

203. As explained in § IV, the *Phono II* Settlement uses a “greater-of” rate structure comprising two prongs: a revenue prong and a TCC prong.¹⁹⁶

204. Despite its reasonableness as an initial benchmark, the *Phono II* Settlement's rate structures were determined under the previous statutory standard of the 801(b) factors.¹⁹⁷ Therefore, one must scrutinize those rate structures through the lens of hypothetical negotiations between willing buyers and willing sellers in a marketplace free of the influence of excessive market power of either party to determine whether they are consistent with the new statutory standard.

205. As explained below, the TCC prong in the *Phono II* Settlement rate structures is not consistent with the WBWS standard because the outcome of a hypothetical “willing buyer /

¹⁹⁴ *Phono III* Determination at 33. See also “Dissenting Opinion of Judge David R. Strickler,” *Determination Of Royalty Rates And Terms For Making And Distributing Phonorecords (Phonorecords III)*, Docket No. 16-CRB-0003-PR (2018-2022), November 5, 2018 (henceforth, “*Phono III* Dissent”) at n. 134 (emphasis original) (“Suffice it to note here that the ‘shadow’ of the statutory license does not ‘shift’ bargaining power so much as it eliminates *unequal* bargaining power.”); *Phono III* Dissent at 138 (“[I]n *Web III (on remand)*, the Judges also found that these settlement agreements – with the ‘shadow’ of a statutory license looming over the negotiations – avoided the same market power imbalance that Professor Marx seeks to eliminate in her Shapley modeling[.]”); *Phono III* Dissent at 139 (“[T]he Judges have previously recognized that a negotiated agreement between industrywide representatives – when a failure to agree will trigger a statutory rate proceeding – will: (1) ameliorate the complementary oligopolists’ ‘abuse of power’ arising from the threat to withhold a ‘must have’ license; and (2) reflect countervailing licensee power that neutralizes the monopoly power of a licensor-collective.”).

¹⁹⁵ *Phono III* Determination at 31-34. See also *Phono III* Dissent at 137 (“When such a settlement [as in *Phono II*] occurs, it contains the same benefits with regard to the avoidance of the ‘hold-out’ effect and the equalizing of bargaining power as produced by Professor Marx’s Shapley value modeling.”).

¹⁹⁶ As explained in § IV, depending on the product, the TCC prong may or not be capped.

¹⁹⁷ See § III.

willing seller” negotiation between the Services and the Copyright Owners is unlikely to be the same as the outcome of unregulated negotiations between the Services and the Majors. Yet, the TCC prong, when operative, creates the potential for setting royalty rates based on negotiations that involve the Majors, who are not a party to the hypothetical negotiations to be considered under *Phono IV*.

206. The TCC prong, when operative, allows for an all-in rate for musical works royalties influenced by:¹⁹⁸

- i. The Majors’ complementary oligopoly power due to their “must have” status;¹⁹⁹
- ii. The relative bargaining power of the Majors and the Services, instead of the relative bargaining power of the Copyright Owners and the Services; and
- iii. A balance of bargaining power (between the Majors and the Services) that cannot be established with sufficient certainty to allow for the calculation of WBWS musical work rates through sound recording rates.

207. The TCC prong also allows the Majors’ preferences for one service over another to impact musical work royalties, even though the Majors are not parties to the hypothetical negotiation that should determine those royalties.

208. Therefore, in my opinion, from an economic perspective, a TCC prong is not consistent with the WBWS standard. Relatedly, as I noted earlier, if the Effective Label Rates are not high enough to trigger the TCC prong, whether capped or uncapped, the *Phono II* Settlement rate structures for Streaming Products effectively reduce to a simpler structure that I propose: revenue-based rates with All-In Minima and/or Mechanical Minima.

209. I expand on the above points in the remainder of § V.B.

1. The TCC Prong, When Operative, Allows for An All-In Rate That Reflects Record Labels’ “Complementary Oligopoly Power”

210. At the outset, I note that the Majors are non-parties to this proceeding, except in connection with Subpart B products, and the statutory standard does not implicate them in the

¹⁹⁸ In this discussion, I assume that there is no TCC cap. As I explained in § IV.A, when operative, the TCC cap essentially becomes an All-In Minimum.

¹⁹⁹ “Money for Something: Music Licensing in the 21st Century,” *Congressional Research Service*, updated February 23, 2021, p. 9 (“[T]he three major record labels had a share of about 68.1% of the global recording industry’s 2019 wholesale revenue.”). *See also* Segal Testimony § IV.

hypothetical “willing buyer / willing seller” negotiation between the Services and the Copyright Owners over musical works rates. Therefore, the Majors should not influence the all-in rate for musical works under the WBWS standard.²⁰⁰

211. A TCC prong, when operative, allows for an all-in rate that reflects the Majors’ complementary oligopoly power, as I explain below, and is therefore inconsistent with the WBWS standard.
212. As I explained in § III, royalties under the WBWS standard should be determined by willing buyers and willing sellers in a hypothetical negotiation. One deviation from this standard is complementary oligopoly power arising from the Cournot complements problem.²⁰¹ Here, I note that the Judges in *Web V*, in setting rates under the WBWS standard, sought to prevent any source of complementary oligopoly power from corrupting rate-setting under a “willing buyer / willing seller” framework.²⁰²
213. Absent any cap, the TCC prong, when operative, sets an all-in rate based on the cost of content determined through negotiations between record labels and Services.
214. Among the record labels, the Majors possess “must have” status in the market for sound recording licenses. In July 2021, RESTRICTED of plays on Apple Music were of a catalog owned by the Majors.²⁰³ Apple’s witness has also explained that a premium service cannot operate without one of the Majors’ catalogs because consumers will go elsewhere.²⁰⁴ The “must

²⁰⁰ Relatedly, the Apple Witness Statement notes that “Because TCC tethers publisher and songwriter payments to label payments, a service that receives a favorable label deal will also get a more favorable publishing deal, even though both services offer the same music and the same type of functionality.” Segal Testimony, ¶ 87. In other words, from an economic perspective, the TCC prong creates opportunities for record labels to influence outcomes in the hypothetical negotiations between the Services and the Copyright Owners.

²⁰¹ See, e.g., *Web IV* Determination at 40 (“[I]t is precisely this complementary oligopoly value that the Judges are declining to include in the statutory rate[.]”); *Web IV* Determination at n. 140 (“The Judges ... will not allow such complementary oligopoly power to be incorporated into the statutory rate.”).

²⁰² See, e.g., *Web V* Determination at 9 (considering “any [] economic factors [that] could [] serve to offset or ameliorate the complementary oligopoly power present on the licensor/record company supply-side of the market.”). I note that the licensors in the *Web* proceedings are the record labels, not the publishers, hence a TCC prong does not fit into the rate structures for non-interactive streaming.

²⁰³ “Money for Something: Music Licensing in the 21st Century,” *Congressional Research Service*, updated February 23, 2021, p. 9. See also Segal Testimony, ¶ 70.

²⁰⁴ Segal Testimony, ¶ 70.

have” status confers Majors with complementary oligopoly power in their negotiations with Services.²⁰⁵ I note that the Judges have previously recognized that the Majors are complementary oligopolists.^{206, 207} Indeed, the Judges’ conclusions in *Web IV* were partly informed by admissions by the Majors that they never offer lower royalty rates in an effort to compete with rivals.²⁰⁸ I also note statements by Universal Music Group (“Universal”) in its filings with the U.S. Federal Trade Commission (“FTC”) during its proposed

²⁰⁵ See my discussion in § V.A.2 about how “must have” status can result in complementary oligopoly power.

²⁰⁶ For example, in the *Web V* Determination, the Judges explained that “interactive licensees ‘must have’ access to the repertoires of each Major in order to survive commercially. ... [T]he ‘Must Have’ status of the three Majors render[s] each a ‘complementary oligopolist.’” *Web V* Determination at 7. Similarly, in the *Web IV* Determination, the Judges accepted expert testimony that “[t]he repertoires of the major record companies are Cournot Complements for interactive services.” *Web IV* Determination at 60. And in the *Phono III* Determination, the Judges noted “the complementary oligopoly effect arising from the ‘must have’ status of the sound recordings in the interactive streaming distribution channel.” *Phono III* Determination at 54. See also *Phono III* Determination at 74 (“As must-have suppliers in an unregulated market, record companies are in a position to walk away from negotiations with the Services and, effectively, put them out of business.”).

²⁰⁷ For example, in the *Web V* Determination, the Judges noted that the Majors’ “must have” status “allows each Major to wield the individual economic power of a monopolist, but the exercise of that power leads to royalty rates that are even greater than those that would be set by a single monopolist.” *Web V* Determination at 7. See also *Phono III* Determination at 70 (noting “the inefficient rates created through the Cournot Complements problem that affects the agreements between record companies and streaming services”); and *Phono III* Determination at 47 (noting “the inefficiently high rates that arise in that unregulated market through the complementary oligopoly structure of the sound recording industry.”).

Furthermore, in the *Web IV* Determination, the Judges highlighted expert testimony that “[t]he repertoires of the major record companies are not substitutes for each other in the eyes of either interactive services or the record companies themselves. This means that there is no true ‘buyer choice’ in this market. Thus, the market for licensing recorded music to interactive services is not workably competitive.” *Web IV* Determination at 60. See also *Web IV* Determination at 42 (“[T]he ‘complementary oligopoly’ power of the Majors [] serves to prevent effective competition.”); *Web IV* Determination at 43 (“‘Complementary oligopoly’ power exercised by the Majors [is] designed to thwart price competition and thus inconsistent with an ‘effectively competitive market[.]’”); *Web IV* Determination at 62 (emphasis original) (“[The] interactive [streaming] [] market not only fails to be competitive, but also is *even worse than a market controlled by a single monopoly supplier.*”); *Web IV* Determination at 66 (emphasis original) (“The Judges were presented with substantial, un rebutted evidence that the interactive services market is *not* effectively competitive.”); *Web IV* Determination at 120 (noting “the anticompetitive effects of the complementary oligopoly that exists among the Majors.”); *Web IV* Determination at 120 (“[T]he Majors could utilize their combined market power to prevent price competition among them by virtue of their complementary oligopoly power[.]”).

²⁰⁸ “[T]he Judges cannot ignore the testimony from several record company witnesses, discussed in this determination, in which they acknowledged that they never attempted to meet their competitors’ pricing when negotiating with interactive services.” *Web IV* Determination at 66.

acquisition of EMI Recorded Music (“EMI”) regarding the “the supranormal pricing that arises from the impact of complementary oligopoly pricing[.]”²⁰⁹

215. Thus, the cost of content determined through negotiations between the Majors and the Services would reflect the Majors’ complementary oligopoly power. As a result, the TCC prong, when operative, allows the Majors’ complementary oligopoly power to be imported into musical works royalties, exposing the Services to the Majors’ market power not only in the label market, but in the publishing market as well.²¹⁰
216. To illustrate how the TCC prong is inconsistent with the WBWS standard, consider the following hypothetical example. Suppose that the sound recordings royalty rate is 10% higher than the WBWS rate in that market due to the Majors’ exercise of complementary oligopoly power. Further, assume that the TCC prong specifies that mechanical royalties should be equal to 25% of the Services’ royalty payments to record labels for sound recording rights.²¹¹ In this example, the mechanical rate would be inflated by 2.5 percentage points ($=10\%*25\%$).²¹² Because that inflation would be solely attributable to the Majors’ complementary oligopoly power, the mechanical rate would not be equal to a WBWS rate and would warrant a downward adjustment.

²⁰⁹ *Web IV* Determination at 74. See also *Web IV* Determination at 60-61 (emphasis original) (“Universal and its advocates asserted to the FTC that the proposed merger would not lessen competition *because the market for interactive services was already not competitive.*”); *Web IV* Determination at 63 (“[T]he merger submissions made by Universal argued that the merger would lead to lower prices because it would remove the Cournot complements pricing effect between [Universal] and EMI.”); “Statement of Bureau of Competition Director Richard A. Feinstein *In the Matter of Vivendi, S.A. and EMI Recorded Music*,” *United States of America Federal Trade Commission*, September 21, 2012 (“Because each Major currently controls recorded music necessary for these streaming services, the music is more complementary than substitutable in this context, leading to limited direct competition between Universal and EMI.”).

²¹⁰ “[W]hen the record companies demand and obtain a higher sound recording royalty rate, under the [*Phono III*] majority’s rate structure, the [S]ervices’ section 115 mechanical royalty rate must increase as well.” *Phono III* Dissent at 3 (emphasis original).

²¹¹ Had *Phono III* not been remanded, the TCC percentage for 2021 would have been 25.2%.

²¹² Under the (remanded) *Phono III* TCC percentage of 26.2% for 2022, the corresponding inflation in the mechanical rate would be 2.62 percentage points. In this example, I do not consider any cap on the TCC prong. As I explained in § IV.A, the cap when operative essentially becomes an All-In Minimum and I address that issue later in this section.

217. However, adjusting *Phono II* Settlement’s TCC percentage to remove the inflationary effect of the Majors’ complementary oligopoly power on the mechanical rate would be a speculative exercise.²¹³ It is difficult to quantify inflation in the rate set in the negotiations between the Majors and Services relative to the rate that would be set in a WBWS negotiation. Further, inflation can change as the Majors and the Services renegotiate contracts. For example, if the Majors’ market power increased one month after the TCC percentage was set, the Majors managed to extract, say, 5% higher sound recording royalties from the Services, and the TCC percentage was set at 20%, the Services would now incur 1% higher mechanical royalties ($=5\% \times 20\%$).
218. Indeed, there is no basis in economics for unconstrained bargaining between complementary oligopolists and the Services to have a bearing on the outcome of a hypothetical “willing buyer / willing seller” negotiation between the Copyright Owners and the Services.²¹⁴
219. Therefore, in my opinion, to arrive at a rate structure consistent with the WBWS standard, the TCC prong should be removed from the calculation of musical works royalties.

2. The TCC Prong Allows the Relative Bargaining Power of the Record Labels and the Services, Not the Relative Bargaining Power of the Copyright Owners and the Services, to Determine Musical Works Royalties

220. As discussed in § III, the current statutory standard requires the Judges to set rates that reflect hypothetical negotiations between willing buyers and willing sellers only. A key determinant of the outcome of such negotiations is the parties’ relative bargaining power. In a hypothetical negotiation between the Copyright Owners and the Services, the parties’ respective bargaining power should shape the determined rate structure and rates.

²¹³ The Majority in *Phono III* attempted to make such an adjustment. *Phono III* at 73 (“The Judges find that the problem of, in essence, importing complementary oligopoly profits into the musical works rate through a TCC percentage can be avoided by reducing the TCC percentage.”)

²¹⁴ The Judges have cautioned “that the ability of the Majors to leverage that market power to create the complementary oligopoly pricing problem c[ould] neither be imported into the noninteractive market nor assumed to be part of the hypothetical effectively competitive noninteractive market.” *Web IV* Determination at 135. Likewise, in setting rates under *Web V*, the Judges considered “any [] economic factors [that] could [] serve to offset or ameliorate the complementary oligopoly power present on the licensor/record company supply-side of the market.” *Web V* Determination at 9.

However, the TCC prong, when operative, can result in all-in rates (for musical works royalties) that, instead, reflect the *relative bargaining power of the Majors versus the Services*.²¹⁵

221. As explained in § V.B.1, sound recording royalties are set by unregulated bargaining between the Majors and the Services, a fact well-accepted by the Judges and the Copyright Owners.²¹⁶ This unregulated bargaining has produced supra-competitive, *i.e.*, higher than effectively competitive, royalty rates that are determined by the *balance of bargaining power* between the Majors and the Services.²¹⁷ This balance can differ in each Major-Service pair; for example, Major A might have more bargaining power versus Service 1 than Service 2, allowing Major A to extract higher royalties from Service 1 than Service 2.
222. More importantly, each party’s bargaining power in a given Major-Service pair is shaped by various factors, such as “market power, better information (*e.g.*, knowledge of the true value of what is being negotiated), and credible threats to retaliate or steer business away from the other player.”²¹⁸ Examining these three factors – in the market for sound recording licensing – reveals that they *do not reflect the relative bargaining power of the Services and the Copyright Owners* in a hypothetical negotiation for musical work licensing.
223. In § V.B.1, I discussed why the first factor, the balance of market power in the market for sound recording licenses, should not influence the determination of musical work royalties

²¹⁵ “Bargaining power can be defined as the advantage one player has over another in establishing desired terms[.]” *Web V* Determination at n. 52.

²¹⁶ See, *e.g.*, *Phono III* Determination at 44 (“Dr Eisenach’s [m]ethod [] for estimating the mechanical rate is based on the following premises: 1. The sound recording rate paid by interactive streaming services is unregulated[.]”); *Phono III* Determination at n. 127 (“Professor Watt ... explains that ... the sound recording rate [is] [] set in an unregulated market[.]”); and *Phono III* Determination at 73-74 (“[T]he Judges rely on Professor Watt’s insight (demonstrated by his bargaining model) that sound recording royalty rates [are set] in the unregulated market[.]”).

²¹⁷ *Web V* Determination at 8 (assessing whether unregulated sound recording rates are an appropriate benchmark based on “changes in bargaining power between the Majors and Spotify”); *Web V* Determination at n. 52 (“A player with enhanced bargaining power tends to extract greater surplus through better terms”); and *Phono III* Determination at 87 (“Due, in part, to her decision to design the model to equalize bargaining power between copyright owners and users, Professor Marx’s model produced lower overall royalties for copyright owners[.]”).

²¹⁸ *Web V* Determination at n. 52 (emphasis added).

in a hypothetical “willing buyer / willing seller” negotiation between the Services and the Copyright Owners.

224. The second factor that determines the Services and the Majors’ relative bargaining power, the balance of information between them, is also unrelated to the relative bargaining power of the Services and the Copyright Owners. The TCC prong thus improperly allows a factor that has no bearing on the relative bargaining power of the Services and the Copyright Owners (*i.e.*, the balance of information between the Services and the Majors) to distort musical work royalties.²¹⁹
225. The third factor (shaping the balance of bargaining power between the Services and the Majors) of the relative “credible threats” each party can make in bilateral negotiations over sound recording licenses also has no bearing on the relative bargaining power of the Services and the Copyright Owners. The Majors can extract supra-competitive royalties in negotiations with the Services because their threat to “hold out” is credible, given the Majors’ “must have” status. By contrast, as shown in my discussion in § II.C.1, consumers can currently choose among a rich array of offerings from multiple Services, in addition to alternative music distribution channels, a fact well understood by the Majors.²²⁰ The

²¹⁹ Consider the following hypothetical example. Suppose that Major A is negotiating – separately – over renewing its sound recording licensing agreements with Service 1 and Service 2. Assume that both services are identical, that the balance of information between Major A and the two services was equal during their previous rounds of negotiations, and that both services currently pay the same royalty rate to Major A. Further, assume that both services have decided to exit their video streaming businesses and focus their resources on their music streaming businesses. Finally, assume that neither Service has announced its decision publicly, but Major A becomes aware of Service 1’s business plans. By eliciting Service 1’s higher willingness-to-pay for sound recording licenses compared to the previous round of negotiations, Major A should be able to extract higher royalties from Service 1 than Service 2—despite both services valuing their music streaming business equally. As a result of a worse balance of information against Major A, Service 1 will thus incur higher total sound recording royalties than Service 2, all else equal, *and* under TCC, it will incur higher musical works royalties as well.

In contrast, in direct negotiations with Service 1, the Copyright Owners would not necessarily have the informational advantage that Major A has. Hence their bargaining power relative to Service 1 would not increase to allow them to extract higher musical works royalties. Yet, if the TCC prong is binding for both services, Service 1 will also incur higher musical work royalties than Service 2, solely due to Major A’s relative information advantage to Service 1 over Service 2.

²²⁰ *Phono III* Determination at 65 (noting “some degree of substitution between interactive streaming services and alternative distribution channels (*e.g.*, non-interactive Internet radio and satellite radio).”); and *Web IV* Determination at 27 (“According to SoundExchange, these results show that interactive services are common, if not predominant, substitutes for noninteractive services, and that listeners

intense competition among the Services and between the Services and alternative distribution channels blunts any threat they can make towards the Majors, leaving the Majors with no incentive to cede to the Services' demands for lower rates.²²¹ The balance of credible threats, therefore, skews towards the Majors, not the Services.

226. In any case, regardless of this skew, there is no economic basis for the relatively credible threats that the Services and the Majors can make in negotiations over sound recording royalties to affect musical works royalties, which must be determined by considering hypothetical negotiations between the Services and the Copyright Owners alone and, therefore, should not involve the Majors.
227. In short, the TCC prong allows the relative bargaining power of the Majors and the Services—a composite of the balance of market power, information, and credible threats between the parties, among other factors—to affect mechanical work royalties even though the determinants of relative bargaining power in the market for sound recording licensing are unrelated to the “relevant roles” of the Copyright Owners and the Services in the market for musical works.
228. The balance of at least two determinants of bargaining power—market power and credible threats—is skewed towards the Majors, causing any musical works rates that are based on sound recording rates to reflect the Majors' superior bargaining power over the Services.
229. Additionally, the TCC prong enables the Majors' strategy of “picking winners” in sound recording licensing to expand into musical works licensing. The Majors' “pick” might experience rate relief in both sound recordings and musical works, thereby acquiring a significant cost advantage against competing Services, as the Majors might have intended. The TCC prong thus gives the Majors potential market power over a second market, albeit one in which they should have none, and where outcomes should be set by hypothetical bargaining between other parties.

would turn to such interactive services in a hypothetical world in which no statutory noninteractive services were available.”).

²²¹ *Web V* Determination at n. 16 (“[C]ountervailing power ... exist[s] if the market in which the licensee operate[s] is not subject to meaningful potential substitution from listening via another form of music delivery.”).

230. Therefore, in my opinion, to be consistent with the WBWS standard, the TCC prong should be removed from the rate structure in the *Phono II* Settlement for Streaming Products (and from any structure that the CRB might adopt).

3. Because The Balance Of Bargaining Power Between The Majors And The Services Cannot Be Established With Sufficient Certainty, A Cost Of Content-Based Calculation Cannot Be Reliably Adjusted To Remove The Impact Of Imbalance In Bargaining Power Between The Majors And The Services

231. In § V.B.1, I explained that it is difficult to quantify inflation in the rate set in the negotiations between Majors and Services relative to the rate that would be set in a hypothetical negotiation between willing buyers and willing sellers. Further, that inflation is not constant, and changes as Majors and Services renegotiate contracts due to, among other things, a change in *the balance of bargaining between the Majors and the Services*.

232. For example, if a particular Major acquired an informational advantage against a particular Service after the musical works rates were determined, the TCC prong could cause rates to increase and become inconsistent with the statutory standard as soon as the Major renegotiated its agreement with the Service and managed to apply its informational advantage.²²²

233. In other words, *the balance of bargaining power between the Majors and the Services cannot be established with sufficient certainty to allow WBWS musical works rates to be reliably set via sound recording rates*.

234. Additionally, if *Services'* bargaining power (relative to the level accounted in operative musical works rates) increases, that could lower the rate implied by the TCC prong. If the rate reduction through the TCC prong is large enough, the reduction will make the TCC prong inoperative and effectively reduce the *Phono II* Settlement rate structure to the same structure that I consider consistent with the WBWS standard.

²²² My example assumes that the TCC prong is binding and, if it includes a cap, the Service's TCC-based royalties fall below the cap.

would have

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Figure 10:

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²²⁵ Sources: APL-PHONO4_00000428 – APL-PHONO4_00000450, APL-PHONO4_00000453, APL-PHONO4_00000455, APL-PHONO4_00000459 - APL-PHONO4_00000463, APL-PHONO4_00000465, APL-PHONO4_00000470 - APL-PHONO4_00000472. Calculated as $([A]-[B])/[B]$, where [A] is the all-in royalty amount calculated by the TCC prong and [B] is the all-in royalty amount calculated by the Revenue prong. In my calculations, I assume that, RESTRICTED it would have paid the same performance royalties as it did under its agreements with the publishers and PROs, which linked mechanical and performance royalties. In other words, I assume that, RESTRICTED, the PROs and Apple would have negotiated agreements that produced the same performance royalties as its actual RESTRICTED

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241. I also analyze RESTRICTED actual royalty payment data for standalone portable subscriptions and find an even stronger pattern. The TCC prong was operative for Amazon in all 33 months when the *Phono III* rates were effective. RESTRICTED

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243. Moreover, as the TCC-based rates would have been RESTRICTED would have been or were inconsistent with the WBWS standard during the majority or all of the effective duration of the *Phono III* rates.

D. The Concerns Purportedly Addressed by the TCC Prong in the *Phono II* Settlement Have Since Been Alleviated or Can Be Alleviated Through Minima In Rate Structures Without Creating Inconsistency With the WBWS Standard

244. In explaining the origins of the greater-of rate structure with minima, the Copyright Owners in *Phono III* acknowledged that, when negotiating the *Phono II* Settlement, “they had no idea which prong would bind – because they had no control over the [S]ervices business models or over the performance rates that are deductions to the All-In rate – so they negotiated all three alternatives to reflect that uncertainty.”²²⁷ Because “there was no data to evaluate the business and Copyright Owners lacked knowledge as to the future development of the interactive market ... the present rate structure ... offered protection against poorly monetized services, through the establishment of alternate prongs.”²²⁸


²²⁶ Source: RESTRICTED

²²⁷ *Phono III* Determination at 30.

²²⁸ *Phono III* Determination at 30.

245. Thus, to the extent that the TCC prong could be justified as a protection against uncertainty, that justification is largely moot, as the interactive streaming market is no longer a nascent industry. As I discussed earlier in §II, there has been strong growth in the U.S. music industry over the last decade. Further, since 2015, both the overall music industry and the streaming industry, in particular, have grown at a rapid pace. Moreover, licensors – record labels and publishers – have shared the fruits of this growth, experiencing sustained growth.
246. To the extent that the TCC prong could be justified as a protection against revenue deferral and revenue measurement concerns, if any, All-In Minima and/or Mechanical Minima can provide that protection while staying consistent with the WBWS standard.

1. All-In Minima and Mechanical Minima are Sufficient Safeguards Against Concerns of Revenue Deferral and Measurement and Are Consistent With the WBWS Standard

247. I understand that in prior proceedings, the Copyright Owners have raised concerns about revenue deferral and the Services sacrificing short-term profits for long-term growth. These are common economic issues and strategies. Given the growth in streaming music industry revenue and the associated growth in publishers’ and record labels’ revenue over the last decade, in my opinion, the above concerns seem more theoretical rather than concerns with real economic implications.²²⁹
248. In *Phono III*, to alleviate these concerns, the Judges reasoned that an uncapped TCC prong was appropriate because it “effectively imports into the rate structure the protections that record companies have negotiated with [the] [S]ervices to avoid the undue diminution of revenue through the practice of revenue deferral.”²³⁰
249. In § V.B, I demonstrated why the TCC prong is inconsistent with the WBWS standard and, therefore, an inappropriate backstop on revenue deferral and displacement—especially because, when uncapped, it does not necessarily act as a backstop at all, **RESTRICTED**
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²²⁹ See, e.g., **Figure 5** and **Figure 6**.

²³⁰ *Phono III* Determination at 36.

250. Rather, All-In Minima or Mechanical Floors, like those that are already part of the *Phono II* Settlement rate structure, based on the number of subscribers or active users to a service, are a better mechanism for addressing revenue deferral and displacement than a TCC prong.
251. *First*, All-In Minima and/or Mechanical Minima are already part of the *Phono II* Settlement rate structure. As explained in § IV.A, the capped TCC prong (used for many services under the *Phono II* Settlement rate structure) effectively acts as an All-In Minimum when the Effective Label Rates are high.²³¹ In other words, revenue deferral and measurement concerns for all practical purposes are already addressed through an All-In Minimum for many service offerings.
252. The *Phono II* Settlement (and *Phono III*) also include Mechanical Floors for many services to address revenue deferral and measurement concerns. I note that the Judges in *Phono III* accepted expert testimony that “the [*Phono II* Settlement] rate structure accommodates [] bundling, deferral, and displacement issues by the use of minima that are triggered if the royalty resulting from the headline percent-of-service revenue falls below the established minima.”²³² This logic was echoed by the Copyright Owners.²³³ For these reasons, the Judges explicitly recognized the *Phono II* Settlement’s per subscriber minima as a “willing buyer / willing seller” solution to concerns of revenue deferral.²³⁴

²³¹ Relatedly, due to the TCC cap, the TCC prong can act as an All-In Minimum for one product while allowing for all-in rates for other products, depending on each product’s Effective Label Rate. Additionally, as I explained in § IV, some Streaming Products have capped TCC prongs (e.g., standalone portable subscriptions – mixed use products such as Apple Music), while others do not (e.g., bundled subscription services such as Apple One). Therefore, the TCC prong can lead to inconsistent rate outcomes for different Streaming Products.

²³² *Phono III* Determination at 20.

²³³ “Copyright Owners urge the Judges to retain the feature of the extant rate regulations establishing a Mechanical Floor[.] ... They emphasize that the revenue displacement and deferral problems they perceive under a percent-of-revenue rate structure are alleviated with a Mechanical Floor because that rate is based on a per-subscriber calculation.” *Phono III* Determination at 26.

²³⁴ “One way the Copyright Owners could avoid this impact [of potential revenue deferral] would be to refuse to accept a percent-of-revenue form of payment and move to a fixed per-unit price. Another way would be to establish a pricing structure that provides minima and floors, below which the revenue could not fall. *The bargain struck between Copyright Owners and Services in 2012 is an example of the latter structure.*” *Phono III* Determination at 21 (emphasis added).

253. *Second*, All-In Minima and/or Mechanical Minima provide greater predictability for the Copyright Owners than a TCC prong, and ensure a minimum payment. This is because All-In Minima and/or Mechanical Minima provide an easy way to calculate the minimum payments under the rate structure. In contrast, TCC changes as record labels renegotiate agreements, making unpredictable the outcome of a TCC prong (*i.e.*, whether the cap or the actual Headline TCC Rate will apply).

254. *Third*, All-In Minima and/or Mechanical Minima de-link royalty payments from revenue, which is exactly what a rate designed to protect against revenue deferral should do. By contrast, a TCC prong links mechanical royalties to label

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Therefore, rather than serving as protection against revenue deferral, a TCC prong continues to

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255. Therefore, in my opinion, a revenue-based rate structure combined with All-In Minima and/or Mechanical Minima is a possible outcome of hypothetical negotiations between the Copyright Owners and the Services and, therefore, is consistent with the WBWS standard.

2. Preserving Per Subscriber Minima and Varying the Minima by Service, As in the *Phono II* Settlement, is Appropriate From an Economic Perspective

256. The *Phono II* Settlement continued a key aspect of the *Phono I* Settlement's rate structure, the use of All-In Minima and/or Mechanical Minima.²³⁶ As discussed in §IV, under the *Phono II* Settlement rate structure, a majority of the Streaming Products have either an All-In Minimum or a Mechanical Minimum or both.²³⁷ These minima vary by Streaming

²³⁵ See, e.g., APL-PHONO4_00001680

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²³⁶ 78 Fed. Reg. 67943 (Nov. 13, 2013); and 74 Fed. Reg. 4532 (Jan. 26, 2009).

²³⁷ Of the ten Streaming Products, four products have neither an All-In Minimum nor a Mechanical Minimum. These products also do not have a TCC cap. These products are: (i) Purchased Content Locker Services (*i.e.*, services offered for free to purchasers of PDDs or CDs); (ii) Mixed Service Bundles (*i.e.*, sales of a music service together with non-music products (such as Internet services) for one price); (iii) Music Bundles (*i.e.*, sales of two or more of physical records (*e.g.*, CDs, LPs), PDDs, or ringtones for one price); and (iv) Free Non-Subscription / Ad-Supported Services (*i.e.*, services that offer streaming music to end-users for free). As I explained in § IV, for some Streaming Products, the rate structures have indirect All-In Minima through the TCC prong.

Product.²³⁸ Subsequently, *Phono III* also maintained varying per subscriber minima, and I understand that both the Services and the Copyright Owners are advocating for proposals that maintain the various mechanical minima in the remand proceedings.²³⁹

257. As I noted in § V.A.1, recent negotiations (under *Phono IV*) between the Copyright Owners and the Majors for royalty rates for other products (*i.e.*, physical phonorecords, PDDs, and ringtones) under the WBWS standard resulted in the *Phono II* Settlement rates and rate structure for those products. This indicates that the Copyright Owners have a revealed preference for using the *Phono II* Settlement rate and rate structure even under the WBWS standard. Therefore, rolling forward the tiered minima/mechanical floor structure, wherever available, from the *Phono II* Settlement is consistent with the Copyright Owners' apparent understanding and interpretation of the WBWS standard.

258. As described above, in many ways other than the TCC prong, the *Phono II* Settlement satisfies the WBWS standard, and in *Phono III*, the majority acknowledged that the floors, in particular, seem to meet this standard. The floors and minima also have corresponded with considerable growth in the interactive streaming market and increasing royalties for publishers and songwriters.

259. Additionally, as All-In Minima and/or Mechanical Floors are the only backstop against revenue deferral concerns that the Copyright Owners raise, and also guarantee a minimum payment to them, in my opinion, All-In Minima and/or Mechanical Floors should be added to the rate structures for the Streaming Products which currently do not have any minima and could generate concerns of revenue deferral.²⁴⁰

260. In § IV, I identified several products without any minima. One of them is ad-supported streaming services. I understand that Apple is proposing a floor for ad-supported services

²³⁸ 78 Fed. Reg. 67943 (Nov. 13, 2013); and 74 Fed. Reg. 4532 (Jan. 26, 2009).

²³⁹ “Attachment A to Final Determination,” *Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)*, Docket No. 16-CRB-0003-PR (2018-2022), November 5, 2018 (henceforth, “*Phono III* Rates and Terms”) at 12-13.

²⁴⁰ To be clear, I understand that there are certain uses for which the Judges have accepted a zero royalty rate (meaning no royalties are owed at all), such as Purchased Content Locker Services for which the Services receive no monetary consideration and promotional offerings. For uses like these, where the rate is appropriately zero, no minima would be required. But where there is a revenue prong and concerns about revenue deferral, minima are useful for offsetting revenue deferral concerns.

under which such services pay the same minimum as equivalent subscription services, with a discount to account for a reduced listening time from ad-funded services while consumers listen to advertisements. From an economic perspective, I agree that adjusting minima based on reduced listening time is one reasonable metric for assessing how to adjust floors for free plans. This is because the current per subscriber minimum for equivalent subscription services reflects the settlement between the Copyright Owners and the Services on the minimum payment that the Copyright Owners should get.²⁴¹

261. From an economic perspective, minima should vary by product (as is the case in the *Phono II* Settlement rate structure) because varying minima are incentive-compatible for the Services—the flexibility in minima allows the Services to enhance variation in their service offerings. To the extent that these new offerings enlarge the consumer base of the music streaming industry and thereby increase aggregate revenues for the industry, they will benefit both the Services and the Copyright Owners under a revenue-based rate structure such as the one I consider consistent with the WBWS standard.
262. For example, I understand that Apple is proposing a new minimum of \$0.25 for full catalog services with significantly limited functionality as compared to premium services, for which the *Phono II* Settlement Mechanical Floor is \$0.50. This new tier enables the Services to offer a new type of offering to consumers with a lower WTP than those who pay for premium services, thus increasing revenue and royalties for all. \$0.25 per subscriber falls between the 15 cents per subscriber Mechanical Floor for non-portable interactive streaming services and the 30 cents per subscriber Mechanical Floor for non-portable interactive streaming plus limited download services, allowing the Services to offer a new type of limited functionality offering with a floor in the range of other services with limited functionality (namely, no portability).
263. As another example, adjustments to floors or minima for family and student plans (as the Judges did in *Phono III* and as the parties have done in several direct agreements²⁴²), and three-month trial plans (as in several Apple agreements), helps the Services be able to

²⁴¹ To be clear, I am not opining that this is the only reasonable way to determine minima for ad-supported services.

²⁴² See, e.g., APL-PHONO4_00000055 **RESTRICTED** APL-PHONO4_00000058 **RESTRICTED**

provide these plans and offerings.

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0.5 of the individual rates for student plans and 1.5 for family plans.²⁴³

264. In short, varying minima in the rate structure can make the Services more willing to accept a rate structure as the Services can address any product-specific concerns through that variation. Therefore, varied minima are incentive-compatible with the Services' requirements. Varied minima also help the Copyright Owners because a greater variety of products increases the total pie by attracting low-WTP consumers. Therefore, in my opinion, preserving varying minima, as is the case under the *Phono II* Settlement rate structure, is appropriate from an economic perspective and is also consistent with the WBWS standard.
265. Further, as I noted in §V.A, recent negotiations (under *Phono IV*) for royalty rates for non-streaming products between the Copyright Owners and the Majors under the WBWS standard resulted in the *Phono II* Settlement rates for those products.²⁴⁴ Therefore, the minima in the *Phono II* Settlement provide a reasonable starting point for estimating the minima for various products, particularly given the Copyright Owners revealed preference for *Phono II* Settlement rates.
266. Therefore, in my opinion, to the extent that the TCC prong could be justified as a protection against revenue deferral and revenue measurement concerns (if any), those concerns can be addressed through either an All-in Minimum or Mechanical Floor basis, or both. Further, varying the minima by product, as in the *Phono II* Settlement, or for other types of discounts (as in *Phono III*) is appropriate from an economic perspective. To be clear, by suggesting varying minima, I am opining that a zero minimum will not be acceptable because a zero minimum under the rate structure I propose would mean no protection against revenue measurement and deferral concerns, if such a concern exists.

²⁴³ Segal Testimony ¶ 122.

²⁴⁴ This negotiation is very different from the unconstrained negotiations between the Majors and the Services that infect TCC. The Majors are the licensees, not licensors, when it comes to physical phonorecords, PDDs, and ringtones, and the negotiation is constrained by the compulsory license.

E. Preserving All-in Rates, As in the *Phono II* Settlement, is Appropriate From an Economic Perspective

267. The *Phono II* Settlement rate structure continued a key aspect of the *Phono I* Settlement's rate structure, the determination of "all-in" rates from which performance royalties are deducted to arrive at mechanical royalties.²⁴⁵ *Phono III* maintained all-in rates.²⁴⁶

268. From an economic perspective, all-in rates should be preserved for at least two reasons: (1) mechanical and performance licenses are perfect complements and, therefore, the related royalty payments should be determined jointly; and (2) all-in rates protect the Services against supra-competitive and unpredictable payments for musical work royalties.

269. Below, I present the economic arguments that, in my opinion, support continuing the use of all-in rates in the rate structure deemed consistent with the WBWS standard applicable to *Phono IV*.

1. Mechanical and Performance Licenses are Perfect Complements and, Therefore, Related Payments Should be Determined Jointly

270. All-in rates result in the joint determination of the mechanical and performance royalties, in the sense that performance royalties must be subtracted from the all-in rates to determine mechanical royalties (subject to a Mechanical Floor, if any). From an economic perspective, all-in rates are reasonable because mechanical and performance royalties ultimately accrue to the same entities, songwriters and publishers.²⁴⁷ In other words, the Copyright Owners' revenues from licensing their copyrights are largely equal to the sum of mechanical and performance royalties. As rational economic agents, the Copyright Owners must take actions to maximize their revenue by *jointly* maximizing their mechanical and

²⁴⁵ 78 Fed. Reg. 67943 (Nov. 13, 2013); 74 Fed. Reg. 4531 (Jan. 26, 2009).

²⁴⁶ *Phono III* Determination at 1.

²⁴⁷ Though performance royalties are administered by PROs, the latter are administrative agents; they are not the holders of the musical work copyrights. See § II.A.2. Because performance royalties are owned by the same entities as mechanical royalties, incorporating performance royalties into the mechanical royalty rate calculation does not pose the same issues as incorporating third-party label market power into the calculation. Further, two of the PROs, ASCAP and BMI, are subject to antitrust consent decrees, which help control royalty rates and prevent these two PROs from exercising oligopoly power.

performance royalties, all else equal.²⁴⁸ As such, there is no economic basis for the Copyright Owners to treat the two royalty streams as separate maximands. Relatedly, I note that:

- In *Phono III*, the Judges “f[ou]nd that the deduction of performance royalties accounts appropriately for the *perfect complementarity* of the performance and mechanical licenses.”²⁴⁹
- The other dominant music distribution channels are not subject to both royalty streams for musical works. Noninteractive streaming (Internet radio or webcasting), satellite radio (SDARS), and terrestrial radio services incur performance royalties but not mechanical royalties; the opposite holds for record labels’ distribution of physical phonorecords and PDDs.²⁵⁰

271. Moreover, setting mechanical royalties independent of performance royalties can result in an inefficient allocation of resources, which can yield deadweight loss. The separation of mechanical and performance royalties creates a situation akin to a shoe distributor purchasing left shoes from a shoe manufacturer with little certainty that he/she will be able to procure the right shoes at a cost that will allow him/her to make a profit. Independent pricing and supply of left and right shoes could result in the distributor under- or over-allocating resources to alternative uses, in expectation of a premium or discount, respectively, for the right shoes over the left shoes. This misallocation of resources can also hurt consumers, to the extent that the distributor under-provides valuable goods that he/she supplies other than shoes.²⁵¹

272. An additional reason why decoupling mechanical from performance royalties is inefficient from an economic perspective is **RESTRICTED** in the “shadow of the statutory rate” – demonstrate their “revealed preferences” for all-in rates. Indeed, **RESTRICTED**

²⁴⁸ A similar conclusion is afforded from the perspective of the Services. The Services’ economic decision-making is based on total royalty payments for musical works, not mechanical or performance royalties alone.

²⁴⁹ *Phono III* Determination at 35 (emphasis added).

²⁵⁰ See §§ II.B-C for a discussion of royalties owed by different distribution channels. See also *Phono III* Determination at 23.

²⁵¹ This example is mostly applicable to multi-product suppliers such as Apple, Amazon, and Google, and less so to pure-play music distributors like Spotify and Pandora.

273. Therefore, in my opinion, all-in rates are appropriate from an economic perspective.

2. All-in Rates Insure the Services Against Supra-Competitive and Unpredictable Payments for Musical Work Royalties

274. Because both mechanical and performance licenses are perfect complements *and* related royalties ultimately accrue to the same entities, songwriters and publishers, the separation of the two rights creates an additional Cournot complements problem that can endow the Copyright Owners with complementary oligopoly power.²⁵² In other words, mechanical-only royalty rates can potentially violate the WBWS standard.

275. Continuing the example in § V.E.1, setting standalone mechanical rates is akin to the shoe manufacturer selling left shoes to the distributor and “holding out” on the pricing and supply of right shoes. If the shoe manufacturer is a “must have” supplier for the distributor, this “hold-out” power will allow the manufacturer to set supra-competitive prices and extract undue surplus from the distributor.

276. Compulsory licensing – or bargaining under its “shadow” – limits publishers’ complementary oligopoly power in the setting of mechanical royalties, while DOJ consent decrees with ASCAP and BMI limit these PROs’ complementary oligopoly power in the setting of performance royalties. However, two smaller but growing PROs, GMR and SESAC, are not subject to antitrust consent decrees and set performance royalties via unconstrained negotiations with the Services. A musical work can have multiple copyright holders. Each copyright holder is entitled to license its performance rights to a different PRO. PROs can then issue licenses only for the portion of the work they control, a phenomenon known as “fractional licensing.” Therefore, to stream a musical work, I understand that the Services might (and often) have to obtain performance licenses and pay

²⁵² See, e.g., APL-PHONO4_00000055 RESTRICTED APL-PHONO4_00000058 RESTRICTED APL-PHONO4_00000042 RESTRICTED APL-PHONO4_00000082 RESTRICTED

²⁵³ See § V.A.2 for an overview of the complementary oligopoly problem in the licensing of musical works rights.

the associated performance royalties to multiple PROs.²⁵⁴ Fractional licensing endows the unregulated PROs, GMR and SESAC, with “hold-out” power if they also hold copyrights to songs that the regulated PROs, ASCAP and BMI, license.²⁵⁵

277. Indeed, **RESTRICTED**

RESTRICTED²⁵⁶

278. To offset the Copyright Owners’ “hold-out power” via the PROs – and the corollary uncertainty it produces – the increase in performance royalties must therefore be counterbalanced by a decrease in mechanical royalties. That is, in order to ensure consistency between musical works royalties and the current statutory standard, all-in rates must be preserved.

F. **RESTRICTED**
Support Different Elements of the Rate Structure that I Consider As Being Consistent With the WBWS Standard

279. In the discussion above, I explained, from an economic perspective, why various elements of the contract I propose (*i.e.*, a revenue-based all-in rate subject to an All-In Minimum or

²⁵⁴ “[T]here has always been fractional licensing of performance rights by the PROs; there typically are multiple songwriters, and publishers with ownership rights in a song and they might not all be affiliated with the same PRO.” *Phono III* Determination at 26 (emphasis omitted).

²⁵⁵ “If ASCAP and BMI were permitted to offer fractional licenses, music users seeking to avoid potential infringement liability would need to meticulously track song ownership before playing music. As the experience of ASCAP and BMI themselves shows, this would be no easy task. ... The difficulties, delays, and imperfections that are tolerated in the context of PRO payments would prove fatal to the businesses of music users, who need to resolve ownership questions *before* playing music to avoid infringement exposure.” “Statement of the Department of Justice on the Closing of the Antitrust Division’s Review of the ASCAP and BMI Consent Decrees,” *U.S. Department of Justice*, August 4, 2016, at 13-14 (emphasis original). The ensuing decision in that matter confirmed that ASCAP and BMI were, indeed, allowed to issue fractional licenses. “Opinion & Declaratory Judgment,” *United States v. Broadcast Music, Inc.*, 64 Civ. 3787 (LLS), 2016 WL 4989938 (S.D.N.Y. Sept. 16, 2016), affirmed by the Second Circuit.

²⁵⁶ Segal Testimony ¶ 65. Apple’s **RESTRICTED**
RESTRICTED See, *e.g.*, APLPHONO4_00000062; APLPHONO4_00000055; APLPHONO4_00000093. In Q2 2021, Apple actually incurred performance royalties of **RESTRICTED** over the expected rate.

Mechanical Minimum or both, and no TCC prong) are justified under the statutory standards applicable to *Phono IV*.

280. In **Exhibit 6**, I provide a summary of numerous

RESTRICTED

serve as useful benchmarks regarding an appropriate rate structure under the WBWS standard.^{257, 258}

- i. Many of these agreements were negotiated against the backdrop of the WBWS standard that is applicable to *Phono IV*.
- ii. The potential complementary oligopoly power of the licensors (publishers and PROs) in most of these agreements was constrained, either by the “shadow” of the statutory license or by antitrust consent decrees.
- iii. The publisher licensors in these agreements are members of the licensors in *Phono IV*.
- iv. The publisher agreements regard the same rights – for mechanical reproduction of musical works and notes – as those at issue in *Phono IV*. The PRO agreements regard rights that are perfect complements to mechanical rights; namely, performance rights.

281.

RESTRICTED

In my opinion, this evidence also confirms that the rate structure I propose can be

²⁵⁷ My review of RESTRICTED with publishers and PROs is not intended to be exhaustive, and there may exist additional RESTRICTED

²⁵⁸ Relatedly, I note that Apple’s Witness statement cites to several of its agreements with record labels, noting that “[a]lthough these agreements are concerning due to the negotiating power of labels (discussed previously), they contain several provisions RESTRICTED. In fact, given the labels’ strong negotiating positions, the fact that they RESTRICTED benefits rights holders.” Segal Testimony, ¶ 134. From an economic perspective, record labels’ acceptance of certain terms RESTRICTED would indicate that those contractual terms promote their economic interests and are therefore, likely to do the same for similarly situated copyright owners. **Exhibit 7** summarizes select Apple agreements with the Majors.

the result of a “willing buyer / willing seller negotiation” and, therefore, consistent with the WBWS standard applicable to *Phono IV*.

282. RESTRICTED

283. RESTRICTED

²⁵⁹ See § II.A.2 for an overview of the publishing market.

²⁶⁰ APL-PHONO4_00000062 - APL-PHONO4_00000081 (ABKCO, 2015); APL-PHONO4_00000093 - APL-PHONO4_00000114 RESTRICTED APL-PHONO4_00000055 RESTRICTED APL-PHONO4_00000058 RESTRICTED APL-PHONO4_00000042 (Sony Music Publishing, 2015); APL-PHONO4_00000082 RESTRICTED APL-PHONO4_00000049 RESTRICTED

²⁶¹ See, e.g., APL-PHONO4_00000121 - APL-PHONO4_00000122 RESTRICTED APL-PHONO4_00000136 RESTRICTED APL-PHONO4_00000144 RESTRICTED APL-PHONO4_00000182 - APL-PHONO4_00000185 RESTRICTED APL-PHONO4_00000117 - APL-PHONO4_00000120 RESTRICTED APL-PHONO4_00000158 - APL-PHONO4_00000159 RESTRICTED APL-PHONO4_00000227 - APL-PHONO4_00000231 RESTRICTED APL-PHONO4_00000128 - APL-PHONO4_00000129 RESTRICTED APL-PHONO4_00000135 RESTRICTED APL-PHONO4_00000141 RESTRICTED APL-PHONO4_00000143 RESTRICTED APL-PHONO4_00000156 - APL-PHONO4_00000157 RESTRICTED APL-PHONO4_00000233 RESTRICTED APL-PHONO4_00000137 RESTRICTED APL-PHONO4_00000138 - APL-PHONO4_00000139 RESTRICTED APL-PHONO4_00000146 - APL-PHONO4_00000147 RESTRICTED APL-PHONO4_00000162 RESTRICTED RESTRICTED APL-PHONO4_00000176 - APL-PHONO4_00000181 RESTRICTED

²⁶² See § II.A.2 for an overview of the PROs’ role in the market for performance rights licensing.

RESTRICTED

284. In short, these real-world examples confirm that various elements of the rate structure I propose have been accepted by numerous parties without complementary oligopoly power in willing negotiations and inform me that the rate structure I propose is a structure consistent with the WBWS standard from an economic perspective.

VI. THE REVENUE ATTRIBUTION FORMULA FOR BUNDLED SUBSCRIPTION SERVICES IN THE *PHONO II* SETTLEMENT SHOULD BE UPDATED

285. Using a revenue-based rate structure requires a proper estimate of the music revenue to which the Headline Revenue Rate must be applied. The calculation of music revenue becomes complex for bundled products.

286. Consider, for example, Apple One. As discussed earlier, Apple offers the option to bundle up to six Apple services into an Apple One subscription. For \$14.95 per month, an individual subscription offers Apple Music, Apple TV+, Apple Arcade, and iCloud+ (with 50GB).²⁶⁶ The standalone individual plan prices for these components are Apple Music

²⁶³ APL-PHONO4_00000711 - APL-PHONO4_00000728 RESTRICTED WITHHELD PENDING MOTION - Agreement: RESTRICTED ; APL-PHONO4_00001233 (GMR, 2017); PHONO4_00001158 - APL-PHONO4_00001168 RESTRICTED

²⁶⁴ See, e.g., APL-PHONO4_00001212 RESTRICTED APL-PHONO4_00001745 RESTRICTED WITHHELD PENDING MOTION - Amendment: RESTRICTED ; WITHHELD PENDING MOTION - Amendment: RESTRICTED APL-PHONO4_00001525 RESTRICTED APL-PHONO4_00001468 RESTRICTED

²⁶⁵ See § V.E.1 on the complementarity of performance rights and mechanical rights.

²⁶⁶ “Apple One,” *Apple*, available at <https://www.apple.com/apple-one/> (accessed on September 22, 2021).

(\$9.99), Apple TV+ (\$4.99), Apple Arcade (\$4.99), and iCloud 50GB (\$0.99) for a total of \$20.96. Thus, Apple sells the bundle at a discount of 28.7% relative to the aggregate standalone price of \$20.96.²⁶⁷

287. There are multiple ways to allocate revenues associated with such bundled products.

288. For example, one can assume that customers buying the bundle have a low willingness to pay for interactive music streaming and care only about the discount on Apple Music offered in the bundle. That is, they would not have subscribed to Apple Music but for the bundle discount. However, they would have been willing to buy products other than the music in the bundle on an individual basis by paying their full price. That is, the demand for other products in the bundle is highly inelastic.

289. As I explained in § IV.B, the *Phono II* Settlement operates under this assumption (*i.e.*, the demand for non-music products is highly inelastic). Under the *Phono II* Settlement, the Services subtract the standalone retail prices of all non-music components of the bundle, and the revenue from music streaming is the remainder. Specifically, the revenue from the bundle is assigned to the non-music products first, and then the music portion is allocated the remaining revenue to a minimum of 40% of its standalone retail price (and 50% for bundles with fewer than 750,000 subscribers).²⁶⁸ Under this approach, the revenue for Apple Music sold in the bundle would be \$3.98 (*i.e.*, \$14.95 minus the \$10.97, which is the aggregate standalone price of the three non-music products in the bundle) per subscriber per month.

290. A different approach assumes that customers buying the bundle have a high willingness to pay for Apple Music and a low willingness to pay for other products in the bundle. That is, the demand for Apple Music for customers buying the bundle and using the music service is highly inelastic. These customers would have been willing to pay the full price of \$9.99 for the music service and bought the bundle only because they cared about the discount on one or more non-music products in the bundle due to their low willingness to pay for those products, *i.e.*, they would not have bought non-music products in the bundle otherwise.

²⁶⁷ At \$14.95, the bundle price represents a discount of \$6.01 (= \$20.96 - \$14.95), which equals 28.7% of the aggregate price of \$20.96.

²⁶⁸ *Phono II* Rates and Terms at § 385.21, Subpart C Service Revenue definition, (5).

Phono III followed this approach.²⁶⁹ Under *Phono III*, the Judges determined that the value of music in the bundle would be the same as the aggregate standalone value of the music products, but payment was made only for purchasers who actually used the music products in the bundle.²⁷⁰

291. Both of the above approaches are *ad hoc* and subjective, and represent two extreme revenue allocations for music service in the bundle. There are several other ways to determine music service revenue for the bundle.²⁷¹

292. For example, the aggregate bundle revenue can be allocated based on consumers' average willingness to pay for each product in the bundle. While theoretically appealing, the approach requires a complex analysis of all the bundles at issue, and the analysis will need to be re-performed every time a Service decides to introduce a new bundle.

293. Therefore, I recommend an alternative that is conceptually similar to the allocation based on willingness to pay and is easy to implement and objective. I propose:

- That the allocation be done using the standalone price of that product instead of consumers' average willingness to pay for bundled products; and
- To attribute each product a proportion of the aggregate bundle revenue where the proportion equals the product's standalone price as a percentage of the sum of the standalone prices of all the products in the bundle.

294. For example, to determine music service revenue for the four-product Apple One bundle that I discussed earlier, one would apply the aggregate discount of 28.7% on the bundle price that I calculated earlier to the standalone price of \$9.99 for the Apple Music individual plan. In other words, music revenue for the bundle would be \$7.12 (= \$9.99 less 28.7% of \$9.99) per subscriber per month, a result between the two extreme allocations under the *Phono II* Settlement and *Phono III*.

²⁶⁹ *Phono III* Rates and Terms at § 385.2, Service Revenue definition, (5).

²⁷⁰ *Phono III* Rates and Terms at § 385.22(a)(4).

²⁷¹ See, e.g., Bergantiños, Gustavo and Moreno-Ternero, Juan D., *The axiomatic approach to the problem of sharing the revenue from bundled pricing*, Center for Operations Research and Econometrics, Belgium, Discussion Paper 2014/27 (June 2014); and Bergantiños, Gustavo and Moreno-Ternero, Juan D., *A new rule for the problem of sharing the revenue from museum passes*, Operations Research Letters, 8 January 2016, pp. 208-211.

to determine the minimum for music revenue from a bundled product is to consider the per subscriber minimum for the standalone product and apply the bundle discount to that. For the Apple One example, this means that the \$0.50 per subscriber per month minimum for the Apple Music plan should be discounted by 28.7% because the minimum is essentially a backstop against potential revenue deferral.

298. Besides the subscription services bundles that I discussed above, Apple also proposes a rate for hardware bundles. The revenue measurement for some of these hardware bundles can become challenging. Subscription bundles have per subscriber per month standalone prices for all the products in the bundle. However, hardware bundles involve a lump-sum one-time payment that is difficult to translate into an equivalent per month price.

299. As I explained above, one can easily address revenue measurement issues through the minima that I propose in my rate structure. For example, one can address the revenue measurement issue for the hardware bundle by determining payable royalties through a per subscriber minimum, *e.g.*, a Mechanical Floor, as Apple has proposed. Specifically, Apple has proposed that hardware bundles bear a \$0.33 per subscriber per month mechanical royalty for up to two years.²⁷⁵ After two years, the Services would pay statutory rates for the music product in the hardware bundle, as if it were a standalone product. As per Apple's witness statement, \$0.33 is **RESTRICTED**

RESTRICTED

RESTRICTED.²⁷⁶ Given the fact that the Mechanical Floor proposed by Apple is **RESTRICTED**, in my opinion, it represents a reasonable estimate that is a possible outcome of hypothetical negotiations required under the WBWS standard.

²⁷⁵ Apple Proposal, §385.2 and §385.21(b)(3)(ii).

²⁷⁶ Segal Testimony, ¶ 132.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information, and belief.

A handwritten signature in cursive script that reads "Stephen D. Prowse".

Stephen D. Prowse, Ph.D.

October 13, 2021

Date



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Employment

1989-1994: Economist, Federal Reserve Board

1992-1993: Economist, Bank for International Settlements
(on leave from FRB)

1994-1998: Senior Economist & Policy Advisor, Federal
Reserve Bank of Dallas

1997-1998: Adjunct Professor, Southern Methodist
University

1998-2000: Director, PricewaterhouseCoopers LLP

2000-2003: Principal, KPMG LLP

2003-present: Senior Managing Director, FTI Consulting,
Inc.

Background

Stephen Prowse is a Senior Managing Director in FTI Consulting, Inc.'s Forensic practice in Dallas, where he provides economic, financial, statistical and valuation analysis to clients, including those involved in litigation, arbitration, mediation and other contexts where parties are engaged in complex business disputes. He specializes in providing advisory and expert witness services to clients involved in antitrust, intellectual property, securities, valuation, and lost profits matters. He has offered expert testimony in all of these areas.

Dr. Prowse's clients represent the Financial Services, Retail, Manufacturing, Oil and Gas, Healthcare, Trucking and Transportation, Consumer Goods, Auto and Telecommunications Industries.

Dr. Prowse has a Ph.D in economics from UCLA and is a CFA Charterholder. Prior to joining FTI, Dr. Prowse was a Partner (Principal) in KPMG LLP's Forensic Practice. Prior to his consulting career, Dr. Prowse was a Senior Economist and Policy Advisor in the Federal Reserve System, where he provided economic and financial policy advice to the Chairman of the Federal Reserve Board and the President of the Federal Reserve Bank of Dallas on economic and financial matters. He has also served as an Adjunct Professor at the Cox School of Business, Southern Methodist University. He has published numerous articles in, and has served as a referee for, academic research journals such as the *Journal of Finance*, *Journal of Financial Economics* and *Journal of Banking and Finance*.

Selected Engagement Experience

Securities/Fraud

Dr. Prowse has extensive experience in assessing damages in securities-related cases, including 10b-5 class action lawsuits. He has valued companies, corporate equities, bonds, futures, options and other derivative securities both in and outside the context of litigation. He has performed event studies, developed appropriate peer groups, and isolated economy-wide, industry-specific and company-specific factors impacting a company's stock price. He has constructed probabilistic financial trading models to track "ins-and-outs" traders and retention shareholders. He has valued both public and private firms in the retail, mining, trucking, energy and sports-related industries, among others.

Antitrust

Dr. Prowse has provided advisory services to clients involved in antitrust litigation. He has performed studies to define the relevant market, assessed the competitive attributes of markets, performed pricing studies, estimated price elasticities of demand and supply, analyzed markets in competitive, monopolistic and oligopolistic environments, and estimated damages. He has also evaluated the competitive attributes of markets and firm's business practices to assess the firm's vulnerability to antitrust lawsuits.

Intellectual Property

Dr. Prowse has assessed economic damages and defined the market in intellectual property matters, including patent infringement, copyright and trade secrets cases. He has calculated reasonable royalties, lost profits, lost convoyed sales, damages through price erosion and unjust enrichment in such cases. He has also offered expert testimony in such matters.

Statistical and Econometric Analysis

Dr. Prowse has provided statistical analysis to clients involved in many types of disputes. He has experience in applying statistical, sampling, econometric, and regression principles in determining lost profits in breach of contract suits, lost wages and lost commissions in wrongful termination suits, and damages in antitrust and intellectual property disputes.

Education & Professional Affiliations

Dr. Prowse holds a Ph.D. in economics from UCLA and is a CFA Charterholder. He is a member of the American Economic Association, the American Finance Association, and the CFA Institute.

Business and Academic Publications

"Dura's Impact on Damages", with Peri Nielsen, Insights The Corporate & Securities Law Advisor, Volume 22 Number 7, July 2008.

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STEPHEN D. PROWSE

DEPOSITION TESTIMONY

ViaSat, Inc.* v. Acacia Communications, Inc., Case No. 3:16-cv-00462-BEN-JMA, (in the United States District Court Southern District of California) (November 2017)

In the Matter of Certain Magnetic Tape Cartridges and Components Thereof, Sony Corporation*, Investigation No. 337-TA-1058 (United States International Trade Commission, Washington, D.C.) (December 2017)

Ojmar U.S., LLC v. Security People, Inc. and Asil Gokcebay* (a.k.a. Bill Gordon), Case No. 16-4948, United States District Court Northern District of California (January 2018)

In the Matter of Certain X-Ray Breast Imaging Devices and Components Thereof, Hologic, Inc.* Investigation No. 337-TA-1063 (United States International Trade Commission, Washington, D.C.) (February 2018)

Huu Nguyen, Plaintiff, v. Nissan North America Inc.*, Case No. 5:16-cv-05591-LHK (NCx), (In the United States District Court Northern District of California) (February 2018)

KimsAPrincess Inc., et al., v. Hillair Capital Management, et al., JAMS Reference No. 1210033201, (JAMS Arbitration) (February 2018)

In the Matter of Certain Automated Teller Machines, ATM Modules, Components Thereof, and Products Containing the Same, Diebold* Investigation No. 337-TA-989 Enforcement Proceeding (United States International Trade Commission, Washington, D.C.) (April 2018)

In the Matter of Certain Thermoplastic-Encapsulated Electric Motors, Components Thereof, and Products and Vehicles Containing Same II BMW*, Honda*, and Toyota*, Investigation No. 337-TA-1073 (United States International Trade Commission, Washington, D.C.) (April 2018)

In the Matter of Certain Industrial Automation Systems and Components Thereof Including Control Systems, Controllers, Visualization Hardware, Motion Control Systems, Networking Equipment, Safety Devices and Power Supplies, Investigation No. 337-TA-1074 (United States International Trade Commission, Washington, D.C.) (July 2018)

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In Re Capacitors Litigation, Nichicon Corporation*, Case No. 17-ND-02801-JD (United States District Court for the Northern District of California, San Francisco Division) (May 2019)

Cedars-Sinai Medical Center* v. Quest Diagnostics Incorporated and Quest Diagnostics Nichols Institute, Case No. 2:17-cv-5169-GW-FFM (In the United States Court for the Central District of California, Western Division) (May 2019)

Dr. Mark A. Barry v. DePuy Synthes Products, Inc., Medical Device Business Services, Inc., and DePuy Synthes Sales, Inc. (d/b/a DePuy Synthes Spine)*, Case No. 2:17-cv-03003-PD (In the United States District Court for the Eastern District of Pennsylvania) (September 2019)

Pacific Biosciences of California, Inc.* v. Oxford Nanopore Technologies, Inc. and Oxford Nanopore Technologies, Ltd., Case No. 17-cv-275-LPS and 17-cv-1353-LPS (In the United States District Court for the District of Delaware) (October 2019)

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Intuitive Surgical, Inc. and Intuitive Surgical Operations, Inc.* v. Auris Health, Inc., C.A. No. 1:18-cv-01359-MN (In the United States District Court for the District of Delaware) (September 2020)

Thomas L. Taylor, III v. Rothstein Kass, P.A.*, Civil Action No. 3:19-cv-01594-D (United States District Court Northern District of Texas Dallas Division) (November 2020)

In the Matter of Certain Electronic Devices, Including Streaming Players, Televisions, Set Top Boxes, Remote Controllers, and Components Thereof, Universal Electronics, Inc.* Investigation No. 337-TA-1200 (United States International Trade Commission, Washington, D.C.) (December 2020)

Finjan, Inc. v. Qualys, Inc.*, C.A. No. 4:18-cv-07229-YGR (In the United States District Court for the Northern District of California, Oakland Division) (February 2021)

In the Matter of Certain Electronic Devices, Including Computers, Tablet Computers and Components and Modules Thereof, Nokia Technologies Oy* and Nokia Corporation*, Investigation No. 337-TA-1208 (United States International Trade Commission, Washington, D.C.) (March 2021)

In the Matter of Certain Mobile Electronic Devices and Laptop Computers, Apple, Inc.*, Investigation No. 337-TA-1215 (United States International Trade Commission, Washington, D.C.) (March 2021)

Nuance Communications, Inc.* v. MModal LLC, MModal IP LLC, LP Parent, Inc. and Legend Parent Inc., C.A. No. 17-1484-MN (In the United States District Court for the District of Delaware) (April 2021)

Illumina, Inc. and Illumina Cambridge Ltd.* v. BGI Genomics Co., LTD., BGI Americas Corp., MGI Tech Co., LTD., MGI Americas, Inc., and Complete Genomics Inc, Case No. 3:19-cv-03770-WHO and Case No. 3:20-cv-01465-WHO (United States District Court for the Northern District of California) (May 2021)

In the Matter of Certain Radio Frequency Identification (“RFID”) Products, Components Thereof, and Products Containing the Same, Kapsch TrafficCom AG*, Kapsch TrafficCom B.V.*, Kapsch TrafficCom Canada, Inc.*, Kapsch TrafficCom Holding Corp.*, Kapsch TrafficCom Holding II US Corp.*, Kapsch TrafficCom IVHS, Inc. (n/k/a Kapsch TrafficCom USA, Inc.)*, Kapsch TrafficCom USA, Inc.*, Kapsch TrafficCom Inc.*, and Kapsch TrafficCom Services USA, Inc.*, Investigation No. 337-TA-1234 (United States International Trade Commission, Washington, D.C.) (July 2021)

In the Matter of Certain Vehicle Control Systems, Vehicles Containing the Same, and Components Thereof, Jaguar Land Rover Limited* and Jaguar Land Rover North America*, Investigation No. 337-TA-1235 (United States International Trade Commission, Washington, D.C.) (July 2021)

Retained by party indicated by a *.

STEPHEN D. PROWSE

TRIAL/ARBITRATION TESTIMONY

KimsA Princess Inc., et al., v. Hillair Capital Management, et al., JAMS Reference No. 1210033201, (JAMS Arbitration) (February 2018)

In the Matter of Certain X-Ray Breast Imaging Devices and Components Thereof, Hologic, Inc.* Investigation No. 337-TA-1063 (United States International Trade Commission, Washington, D.C.) (April 2018)

In the Matter of Certain Magnetic Tape Cartridges and Components Thereof, Sony Corporation*, Investigation No. 337-TA-1058 (United States International Trade Commission, Washington, D.C.) (May 2018)

In the Matter of Certain Automated Teller Machines, ATM Modules, Components Thereof, and Products Containing the Same, Diebold* Investigation No. 337-TA-989 Enforcement Proceeding (United States International Trade Commission, Washington, D.C.) (July 2018)

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In the Matter of Certain Industrial Automation Systems and Components Thereof Including Control Systems, Controllers, Visualization Hardware, Motion Control Systems, Networking Equipment, Safety Devices and Power Supplies, Investigation No. 337-TA-1074 (United States International Trade Commission, Washington, D.C.) (September 2018)

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In the Matter of Certain Subsea Telecommunication Systems and Components Thereof, Nokia, Inc.*, Investigation No. 337-TA-1098, (United States International Trade Commission Washington, D.C.) (December 2018)

ViaSat, Inc.* v. Acacia Communications, Inc., (in the Superior Court of the State of California for the County of San Diego) (July 2019)

In the Matter of Certain LTE- and 3G-Compliant Cellular Communications Devices, Apple Incorporated*, HTC Corporation and HTC America, Inc.*, ZTE Corporation and ZTE (USA) Inc.*, Investigation No. 337-TA-1138 (United States International Trade Commission, Washington, D.C.) (September 2019)

In the Matter of Certain Bone Cements, Components Thereof & Products Containing the Same, Heraeus Medical LLC* and Heraeus Medical GmbH*, Investigation No. 337-TA-1153 (United States International Trade Commission, Washington, D.C.) (January 2020)

In the Matter of Certain Light-Emitting Diode Products, Systems, and Components Thereof (III), Lighting Science Group Corporation,* Health Inc.* and Global Value Lighting*, Investigation No. 337-TA-1168 (United States International Trade Commission, Washington, D.C.) (February 2020)

Pacific Biosciences of California, Inc.* v. Oxford Nanopore Technologies, Inc. and Oxford Nanopore Technologies, Ltd., Case No. 17-cv-275-LPS and 17-cv-1353-LPS (In the United States District Court for the District of Delaware) (March 2020)

Theravance Biopharma US Holdings, Inc. and Triple Royalty Sub II LLC, Claimants,* v. Theravance Respiratory Company, LLC and Innoviva, Inc. (In the Court of Chancery of the State of Delaware) (February 2021)

In the Matter of Certain Electronic Devices, Including Streaming Players, Televisions, Set Top Boxes, Remote Controllers, and Components Thereof, Universal Electronics, Inc.* Investigation No. 337-TA-1200 (United States International Trade Commission, Washington, D.C.) (April 2021)

Retained by party indicated by a *.

Exhibit 2
Documents Relied Upon

Bates Stamped Documents

Beginning Bates

AMZN_Phono_IV_00003125

APL-PHONO4_00000042

APL-PHONO4_00000049

APL-PHONO4_00000055

APL-PHONO4_00000058

APL-PHONO4_00000062

APL-PHONO4_00000082

APL-PHONO4_00000093

APL-PHONO4_00000117

APL-PHONO4_00000121

APL-PHONO4_00000123

APL-PHONO4_00000128

APL-PHONO4_00000130

APL-PHONO4_00000135

APL-PHONO4_00000136

APL-PHONO4_00000137

APL-PHONO4_00000138

APL-PHONO4_00000141

APL-PHONO4_00000143

APL-PHONO4_00000144

APL-PHONO4_00000146

APL-PHONO4_00000156

APL-PHONO4_00000158

APL-PHONO4_00000162

APL-PHONO4_00000176

APL-PHONO4_00000182

APL-PHONO4_00000227

APL-PHONO4_00000233

APL-PHONO4_00000428

APL-PHONO4_00000429

APL-PHONO4_00000430

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APL-PHONO4_00000446

End Bates

APL-PHONO4_00000048

APL-PHONO4_00000054

APL-PHONO4_00000057

APL-PHONO4_00000061

APL-PHONO4_00000081

APL-PHONO4_00000092

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APL-PHONO4_00001756
SPOT_P4_000001228

APL-PHONO4_00000482
APL-PHONO4_00000566
APL-PHONO4_00000625
APL-PHONO4_00000670
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APL-PHONO4_00001755
APL-PHONO4_00001763

WITHHELD PENDING MOTION - Agreement:

RESTRICTED

WITHHELD PENDING MOTION - Amendment:

RESTRICTED

WITHHELD PENDING MOTION - Amendment:

RESTRICTED

Legal Materials

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17 U.S.C. § 115(c)(1)(F)(i).

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74 Fed. Reg. 4531-2 (Jan. 26, 2009).

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Exhibit 3
Comparison of Music Streaming Services^a

	Services Offered	Monthly Subscription Price	Discounts Available (Monthly Subscription Price)	Trials Available	Available as Part of a Bundle?	Bundled Products
Amazon ^{1, 2, 3, 4, 5}	Amazon Music Free Amazon Music Prime Amazon Music Unlimited Amazon Music HD	Prime free for Amazon Prime members Unlimited/HD \$7.99 for Prime members, \$9.99 for all others	Unlimited/HD Single Device Plan \$3.99 Unlimited/HD Family Plan \$14.99 Unlimited/HD Student Plan \$0.99	30-day free trial for Unlimited/HD	x	Amazon Prime
Apple ^{6, 7}	Apple Music	\$9.99	Family Plan \$14.99 Student Plan \$4.99	3-month free trial	x	Apple tv+ Apple Arcade Apple iCloud+ Apple News+ Apple Fitness+
Google ^{8, 9}	YouTube Music Free YouTube Music Premium	\$9.99	Family Plan \$14.99 Student Plan \$4.99	30-day free trial	x	YouTube Premium
Pandora ^{10, 11, 12, 13}	Pandora (Free) Pandora Plus Pandora Premium	Plus \$4.99 Premium \$9.99	Premium Family Plan \$14.99 Premium Student Plan \$4.99 Premium Military Plan \$7.99	30-day free trial for Plus 60-day free trial for Premium plans		
Spotify ¹⁴	Spotify Free Spotify Premium	\$9.99	Family Plan \$15.99 Student Plan \$4.99 Duo Plan \$12.99	30-day free trial	x	Hulu SHOWTIME

Note:

[a] This list is not necessarily exhaustive, but provides an overview of the types of offerings provided by the primary interactive streaming services

Sources:

[1] “What are the Differences Between the Amazon Music Subscriptions,” *Amazon*, available at <https://www.amazon.com/gp/help/customer/display.html?nodeId=GW3PHAUCZM8L7W9L> (accessed on September 23, 2021)

[2] “Amazon Music Unlimited,” *Amazon*, available at <https://www.amazon.com/music/unlimited/> (accessed on September 23, 2021)

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[4] “Amazon Music Unlimited - Family Plan,” *Amazon*, available at <https://www.amazon.com/music/unlimited/family/> (accessed on October 9, 2021)

[5] “Amazon Music Unlimited - Single Device Plan,” *Amazon*, available at <https://www.amazon.com/music/unlimited/echo> (accessed on October 6, 2021)

[6] “Apple Music,” *Apple*, available at <https://www.apple.com/apple-music/> (accessed on September 22, 2021)

[7] “Apple One,” *Apple*, available at <https://www.apple.com/apple-one/> (accessed on September 22, 2021)

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[9] “YouTube Premium,” *YouTube*, available at <https://www.youtube.com/premium> (accessed on September 23, 2021)

[10] “Pandora,” *Pandora*, available at <https://www.pandora.com/> (accessed on October 6, 2021)

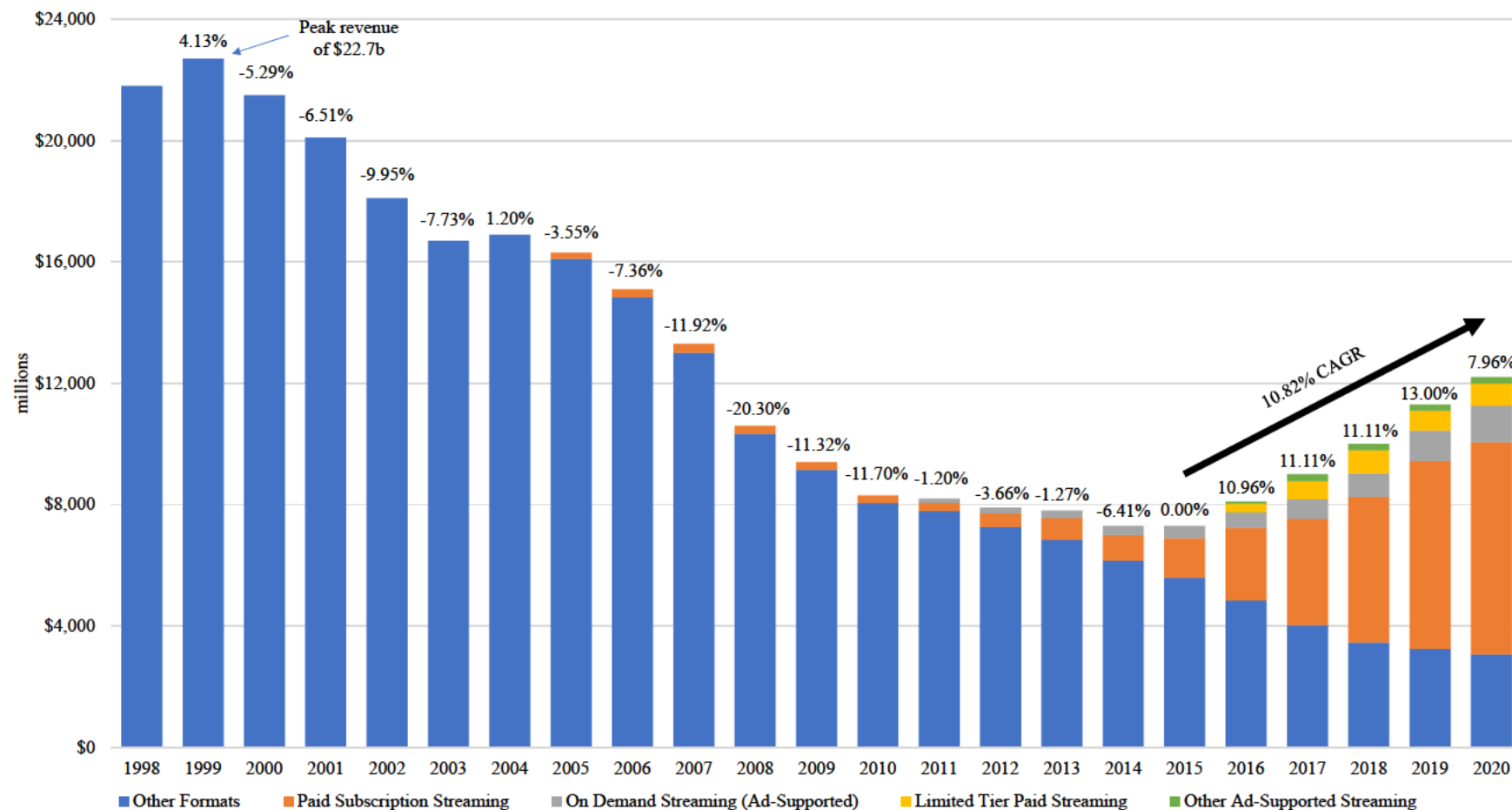
[11] “Pandora Premium Family,” *Pandora*, available at <https://www.pandora.com/upgrade/premium/family-plan> (accessed on October 6, 2021)

[12] “Pandora Premium Student,” *Pandora*, available at <https://www.pandora.com/upgrade/premium/student> (accessed on September 23, 2021)

[13] “Pandora Premium Military,” *Pandora*, available at <https://www.pandora.com/upgrade/premium/military> (accessed on September 23, 2021)

[14] “Spotify Premium,” *Spotify*, available at <https://www.spotify.com/us/premium/#plans> (accessed on October 6, 2021)

Exhibit 4
U.S. Recorded Music Revenues by Format, 1998 to 2020



Notes:

Revenues adjusted for inflation (shown in 2020 dollars)

Values are at recommended or estimated list price. Formats with no retail value equivalent included at wholesale price

Updated accounting standards beginning in 2016

Paid Subscription Streaming includes streaming, tethered, and other paid subscription services not operating under statutory licenses

On-Demand Streaming (Ad-Supported) includes ad-supported audio and music video services not operating under statutory licenses

Limited Tier Paid Streaming includes streaming services with interactivity limitations by availability, device restriction, catalog limitations, on demand access, or other factors

Other Ad-Supported Streaming includes revenues paid directly for statutory services that are not distributed by SoundExchange and not included in other streaming categories

Values may vary from Figures 2-3, as the data in this chart has been updated retroactively to better reflect the actual revenues in each year, whereas the RIAA Year-End Revenue Reports are based on year-end best estimates

Source:

"U.S. Recorded Music Revenues by Format," *RIAA*, published May 11, 2018, updated February 26, 2021, available at

https://public.tableau.com/app/profile/riaa1295/viz/U_S_RecordedMusicRevenuesbyFormat_0/RevenuesbyFormat (accessed October 7, 2021)

Exhibit 5

Harry Fox Agency *Phono II* Rate Charts



Standalone Portable Subscriptions, Mixed Use =

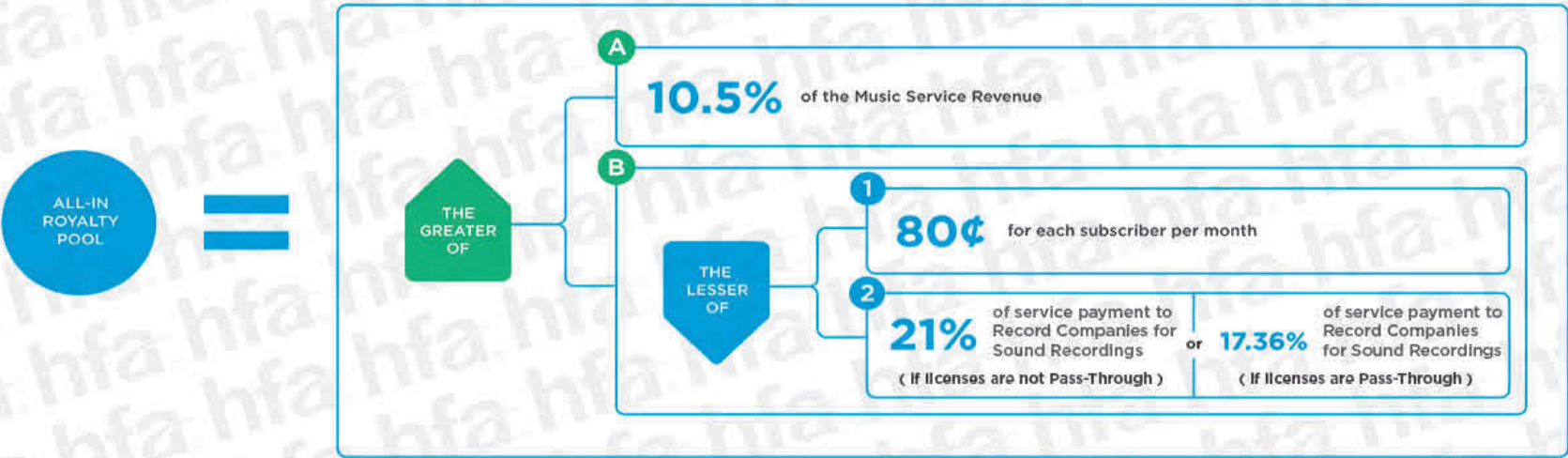
Subscription services accessible through portable devices such as mobile phones



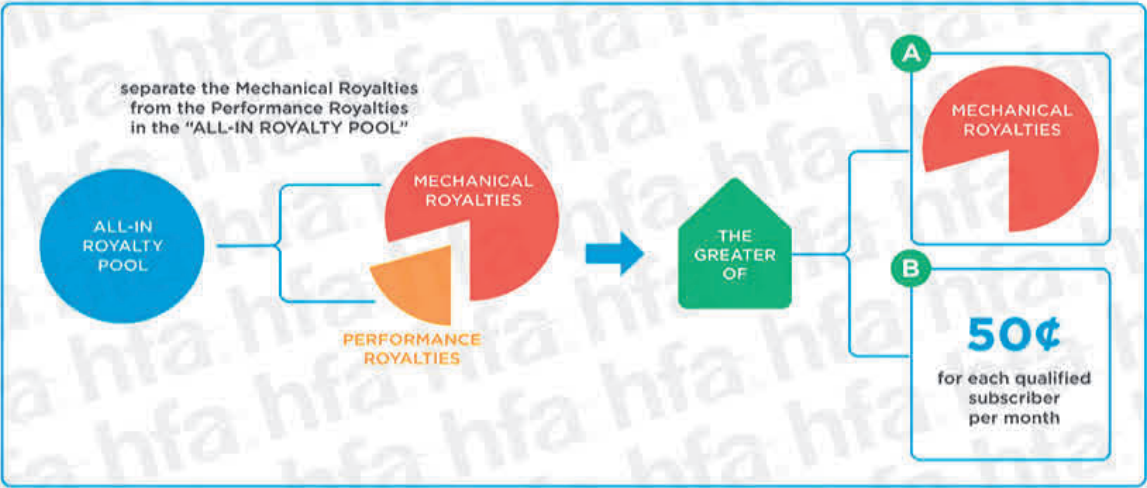
+



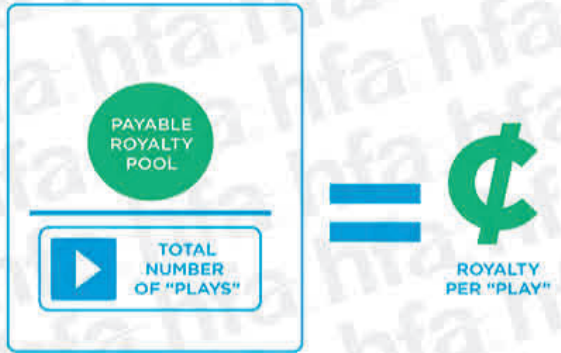
1 CALCULATE THE ALL-IN ROYALTY POOL



2 CALCULATE THE PAYABLE ROYALTY POOL



3 ALLOCATE PAYABLE ROYALTY POOL



(ALLOCATION IS BASED ON THE NUMBER OF "PLAYS")

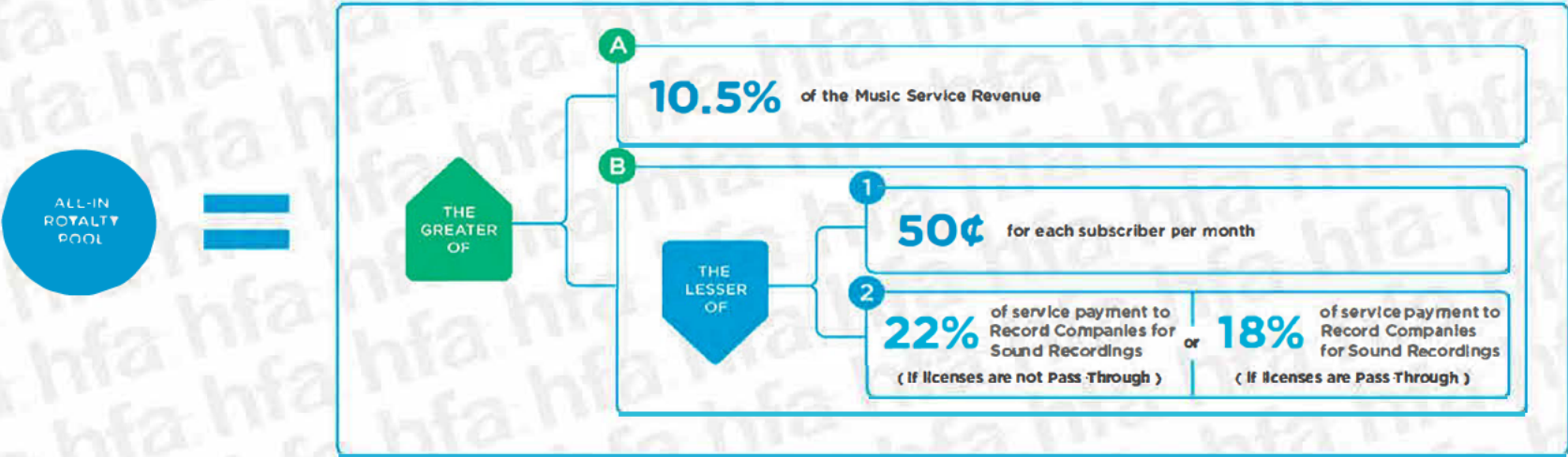


Standalone Non-portable Subscriptions, Streaming Only =

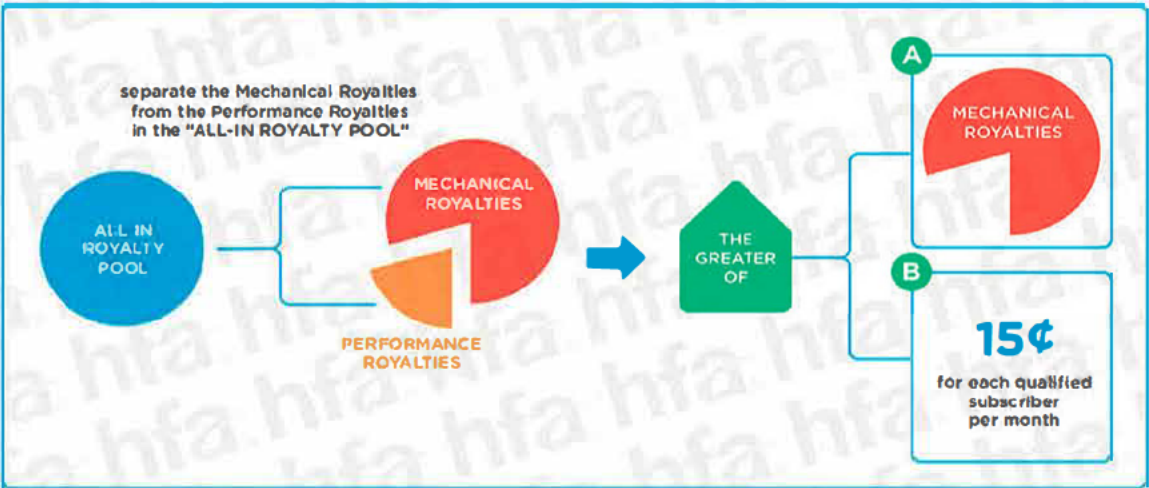
Subscription services accessible on desktop computers that only play music when a live internet connection exists



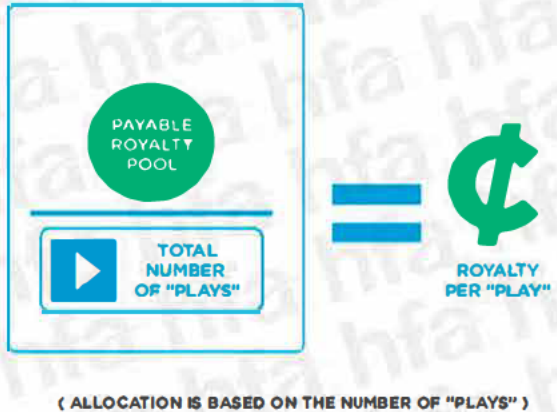
1 CALCULATE THE ALL-IN ROYALTY POOL



2 CALCULATE THE PAYABLE ROYALTY POOL



3 ALLOCATE PAYABLE ROYALTY POOL



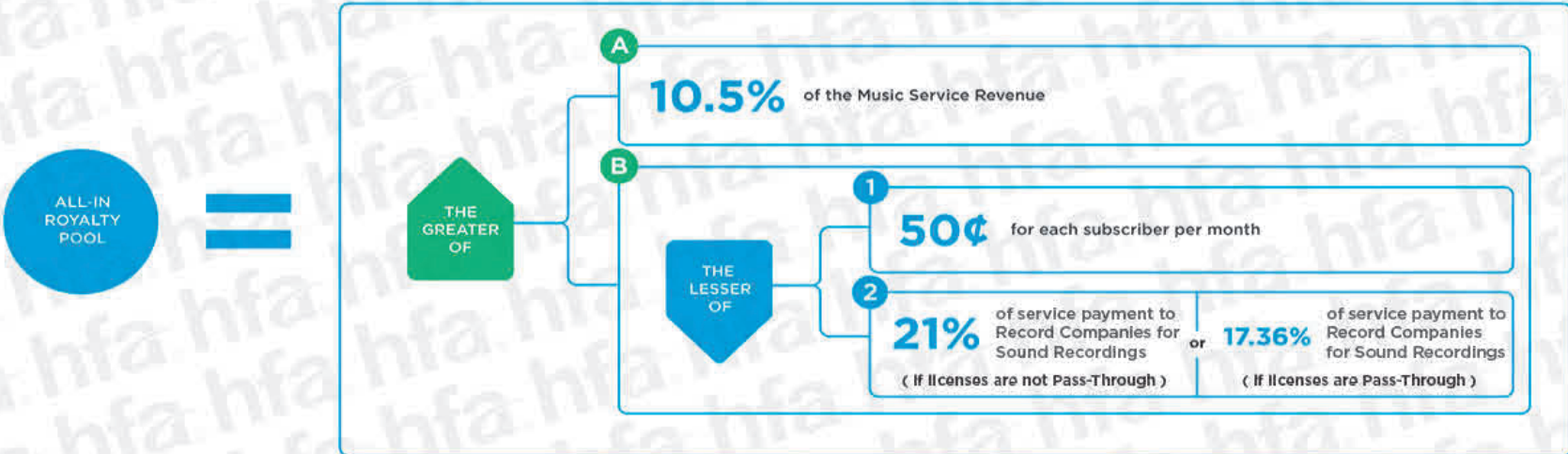


Standalone Non-portable Subscriptions, Mixed Use =

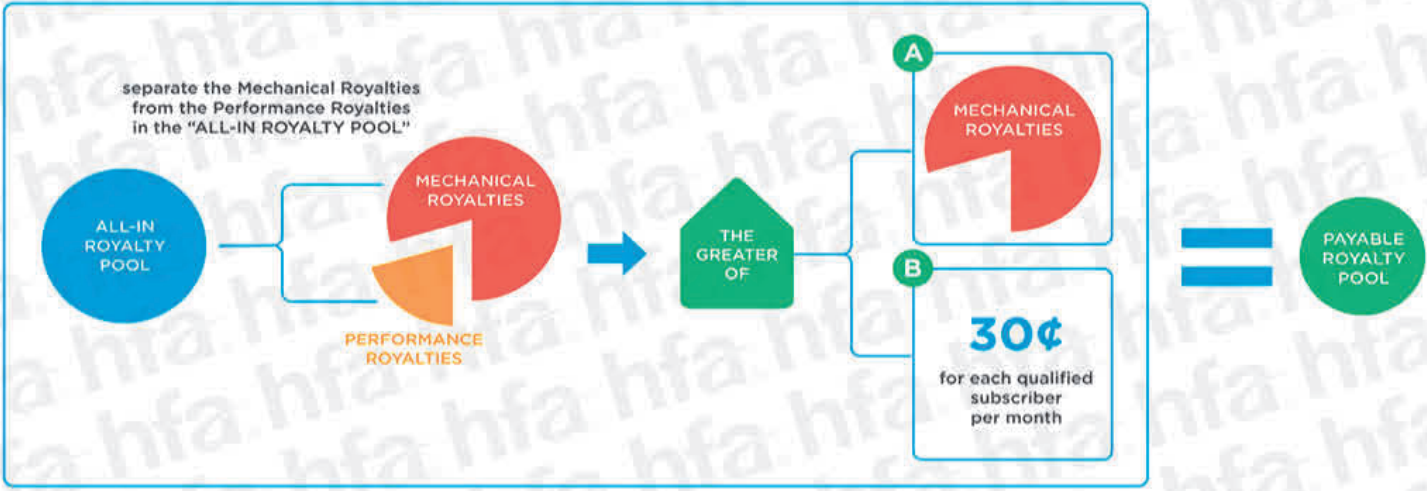
Subscription services accessible on desktop computers that play music whether the computer is online or offline



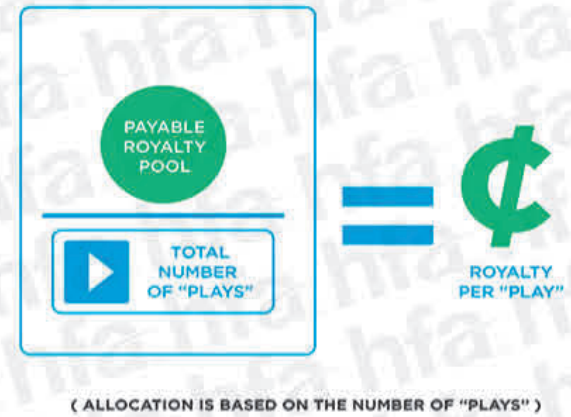
1 CALCULATE THE ALL-IN ROYALTY POOL



2 CALCULATE THE PAYABLE ROYALTY POOL



3 ALLOCATE PAYABLE ROYALTY POOL

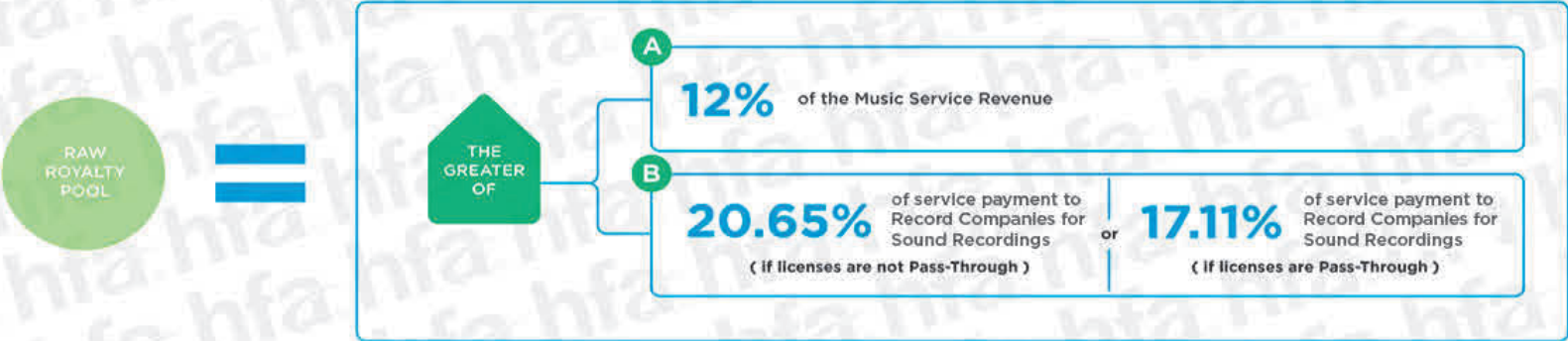


Paid Locker Service =

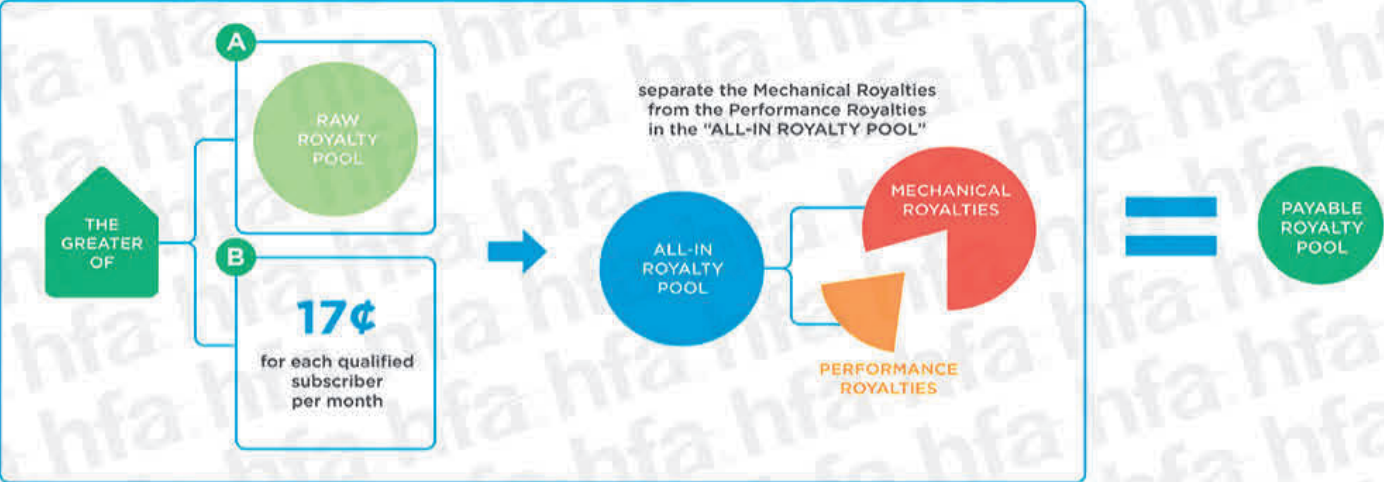
Service that provides continuous access to internet connected devices to recordings previously purchased by the end user



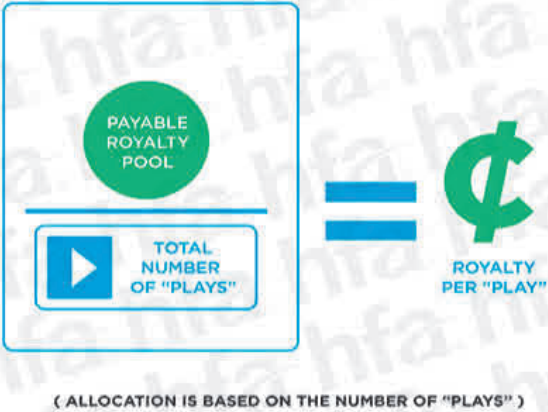
1 CALCULATE THE RAW ROYALTY POOL



2 CALCULATE THE PAYABLE ROYALTY POOL



3 ALLOCATE PAYABLE ROYALTY POOL



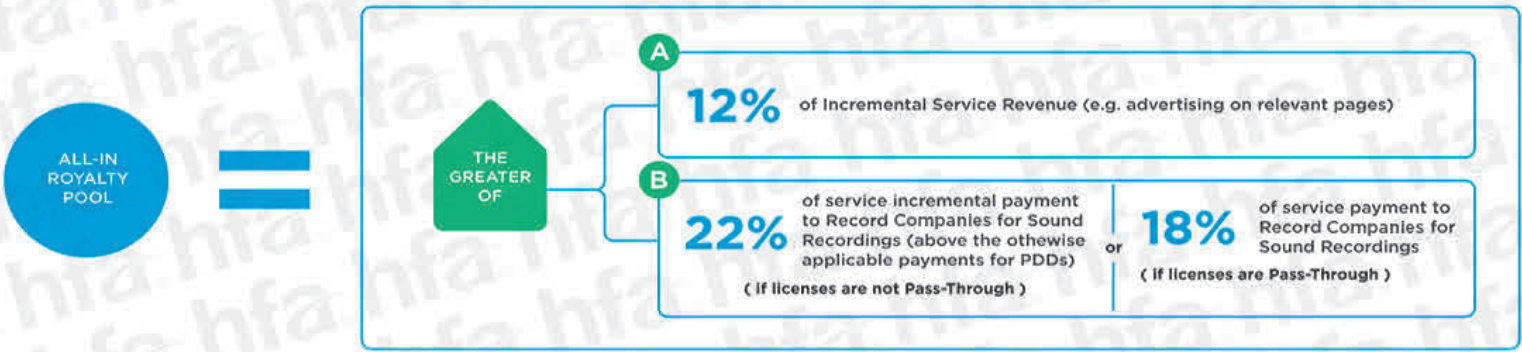


Purchased Content Locker =

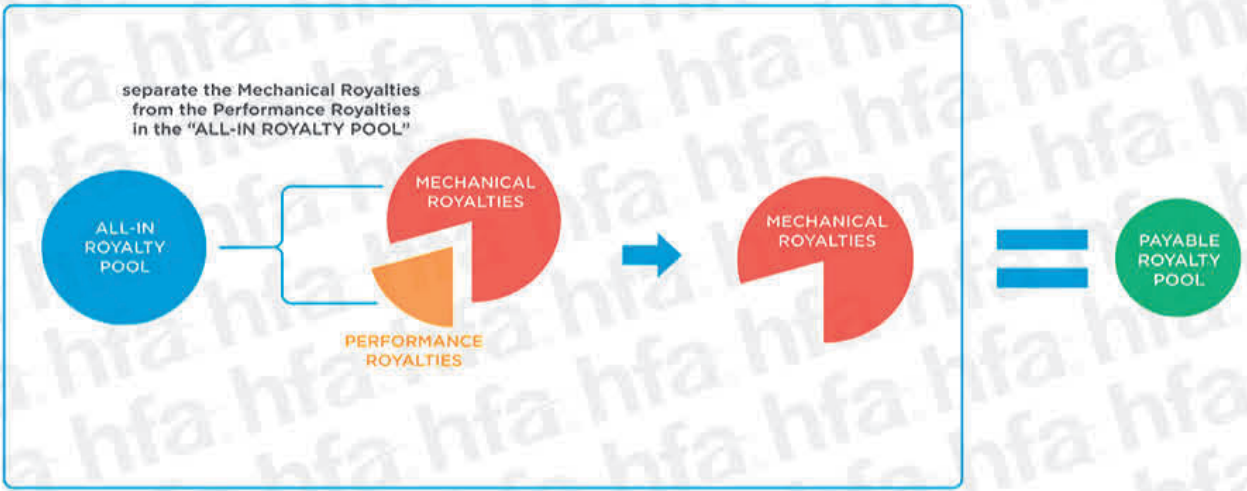
Services offered for free to purchasers of Permanent Downloads or CDs



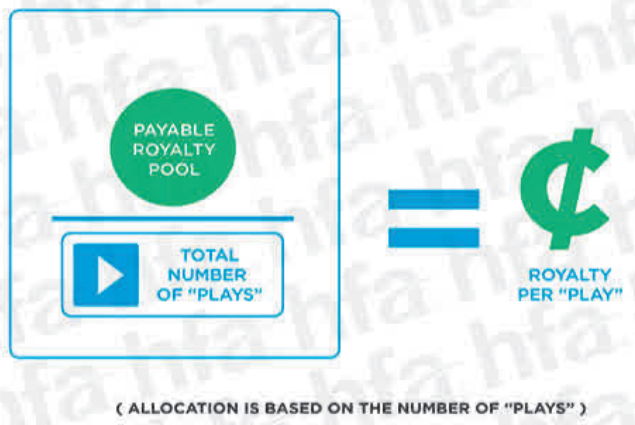
1 CALCULATE THE ALL-IN ROYALTY POOL



2 CALCULATE THE PAYABLE ROYALTY POOL



3 ALLOCATE PAYABLE ROYALTY POOL

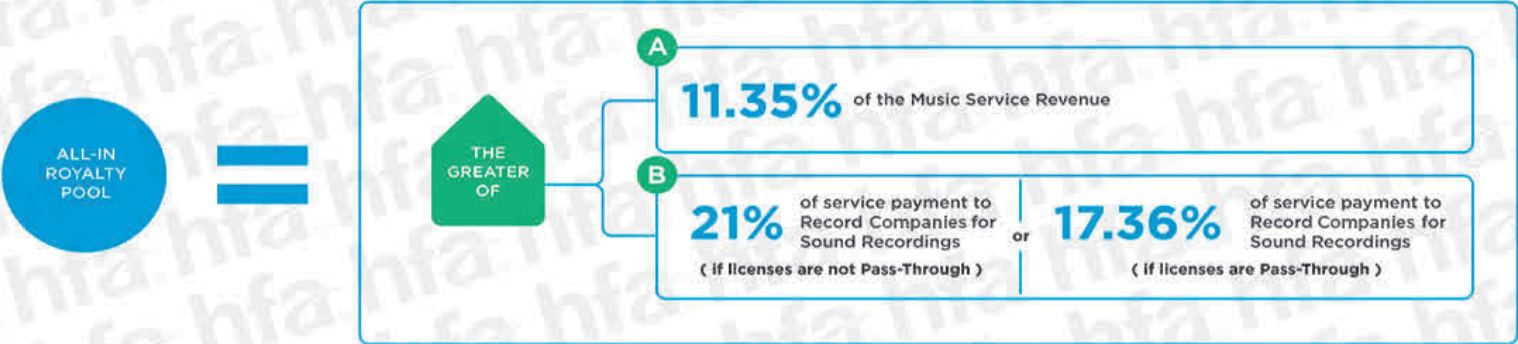


Mixed Service Bundle =

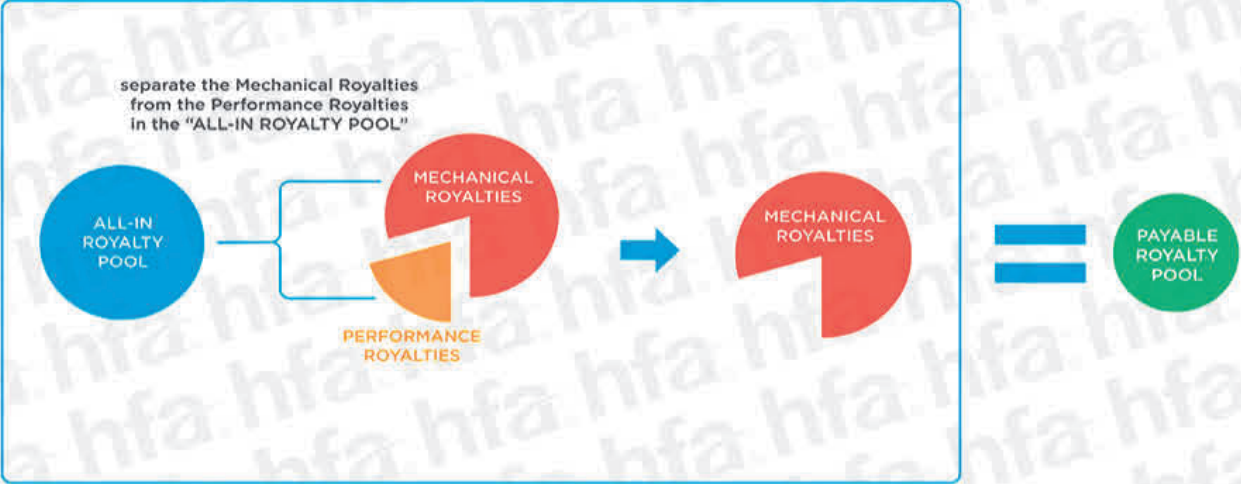
Sale of a music service together with a non-music product
(such as Internet services) for one price



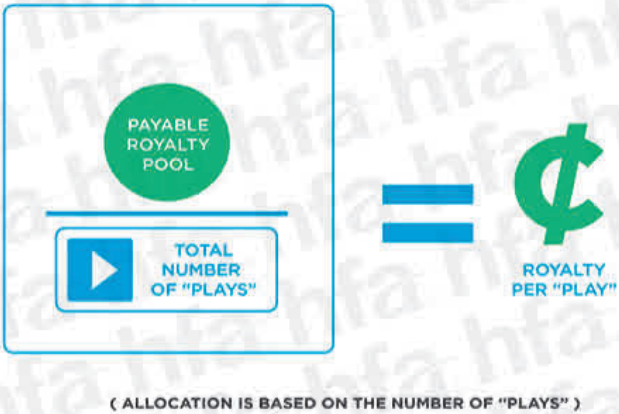
1 CALCULATE THE ALL-IN ROYALTY POOL



2 CALCULATE THE PAYABLE ROYALTY POOL



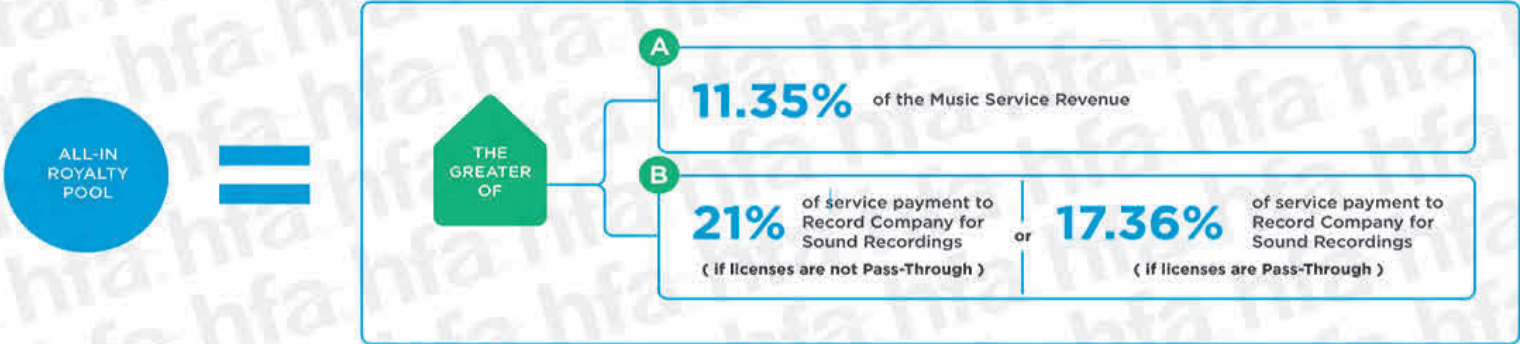
3 ALLOCATE PAYABLE ROYALTY POOL



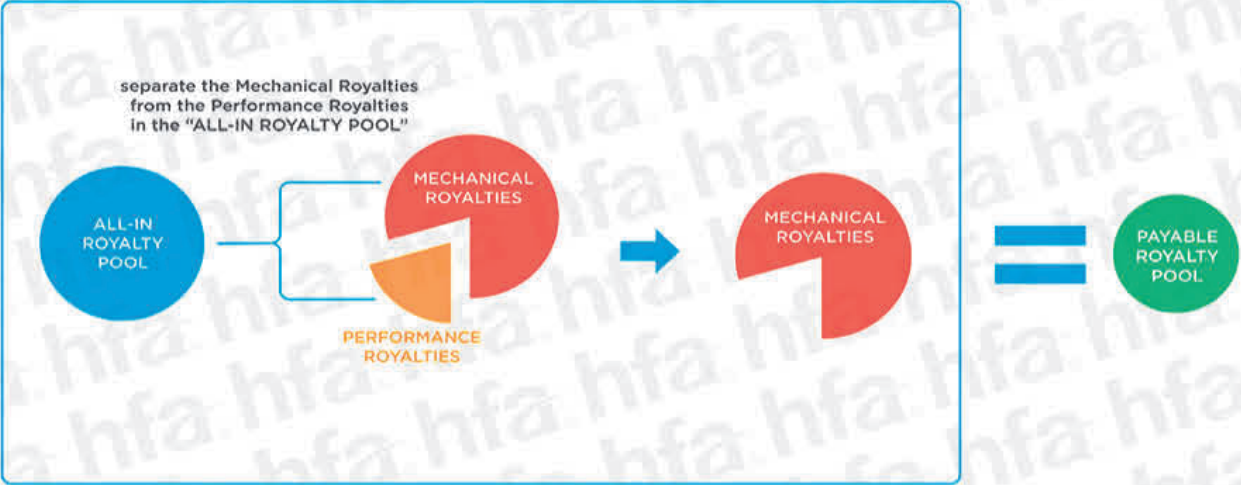
Music Bundles =
Sale of two or more of Physical Records (e.g. CDs, LPs),
Permanent Digital Downloads or Ringtones for one price



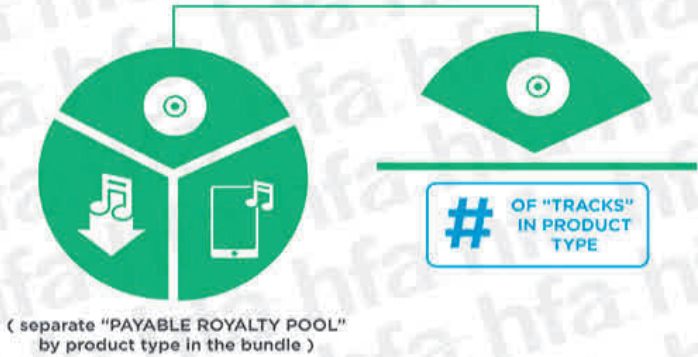
1 CALCULATE THE ALL-IN ROYALTY POOL



2 CALCULATE THE PAYABLE ROYALTY POOL



3 ALLOCATE PAYABLE ROYALTY POOL



(ALLOCATION IS BASED ON RATIO OF STANDALONE PRICES AND NUMBER OF TRACKS IN EACH CONFIGURATION)

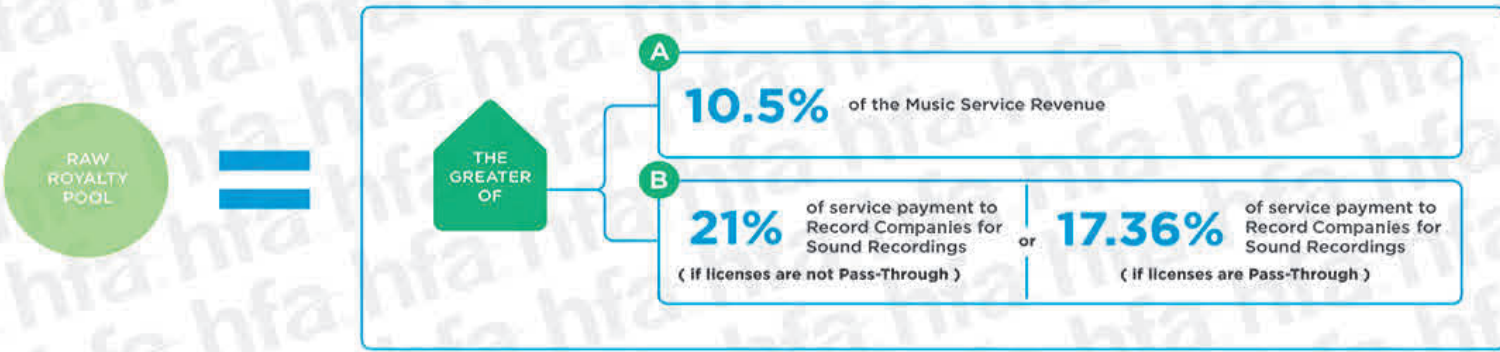


Limited Offering =

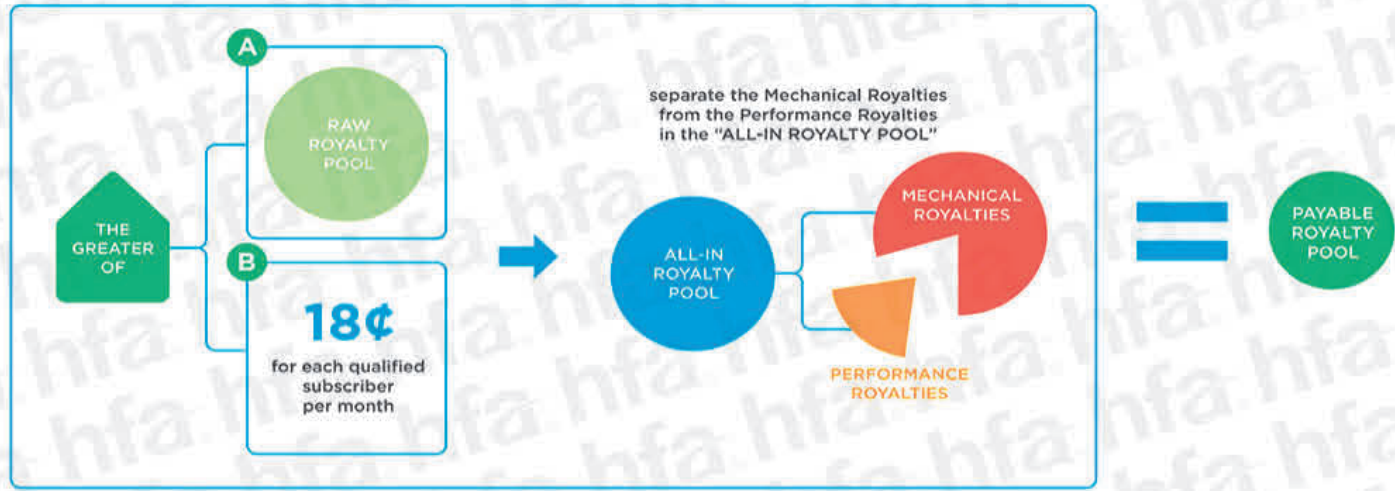
Subscription services that offers a very limited catalog of music or services that stream preprogrammed playlists.



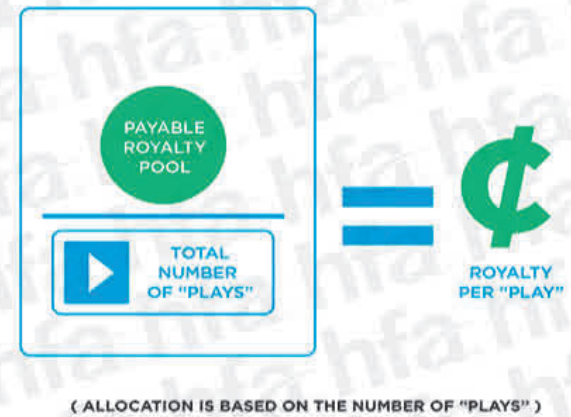
1 CALCULATE THE RAW ROYALTY POOL




2 CALCULATE THE PAYABLE ROYALTY POOL



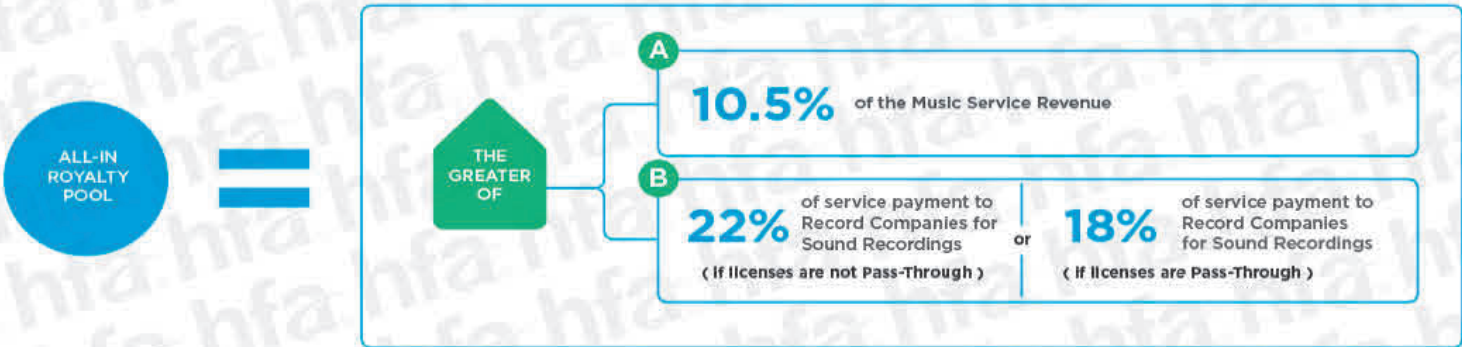
3 ALLOCATE PAYABLE ROYALTY POOL



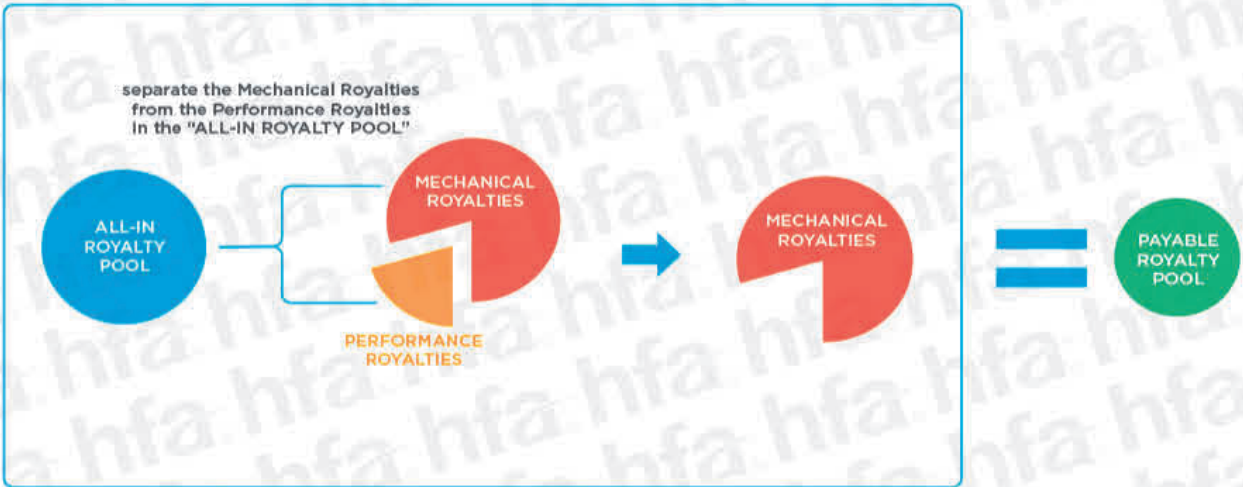
 **Free Non-Subscription / Ad-Supported Services =**
Services that offer streaming music to end users for free



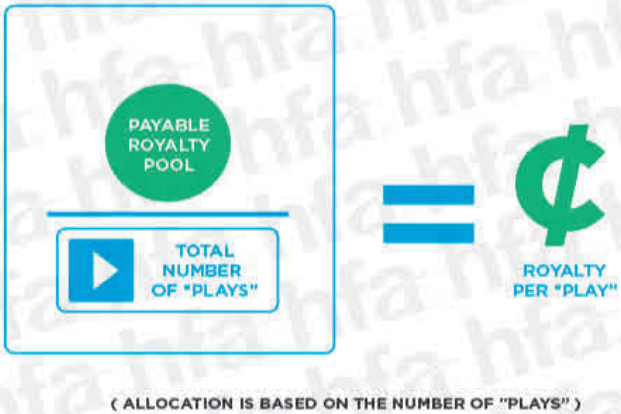
1 CALCULATE THE ALL-IN ROYALTY POOL



2 CALCULATE THE PAYABLE ROYALTY POOL



3 ALLOCATE PAYABLE ROYALTY POOL

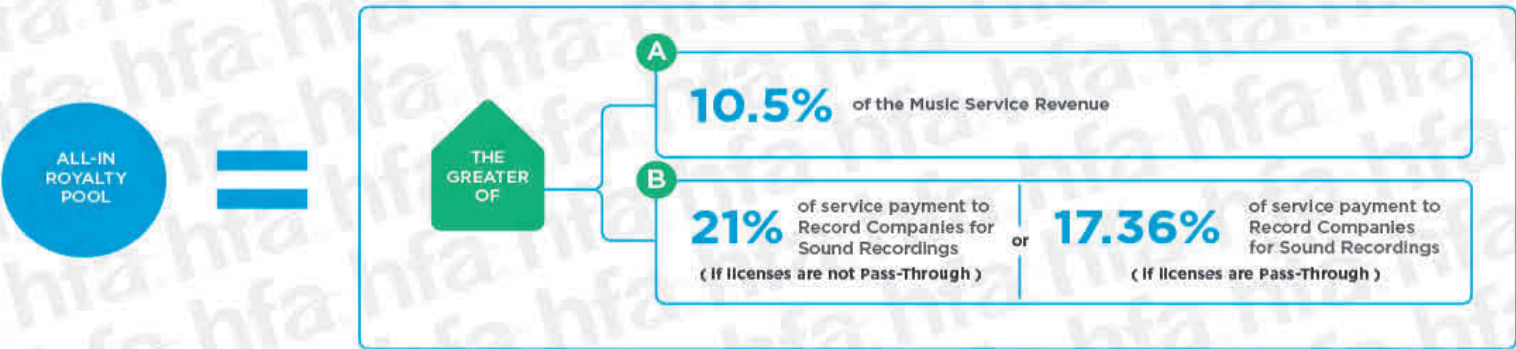


Bundled Subscription Services =

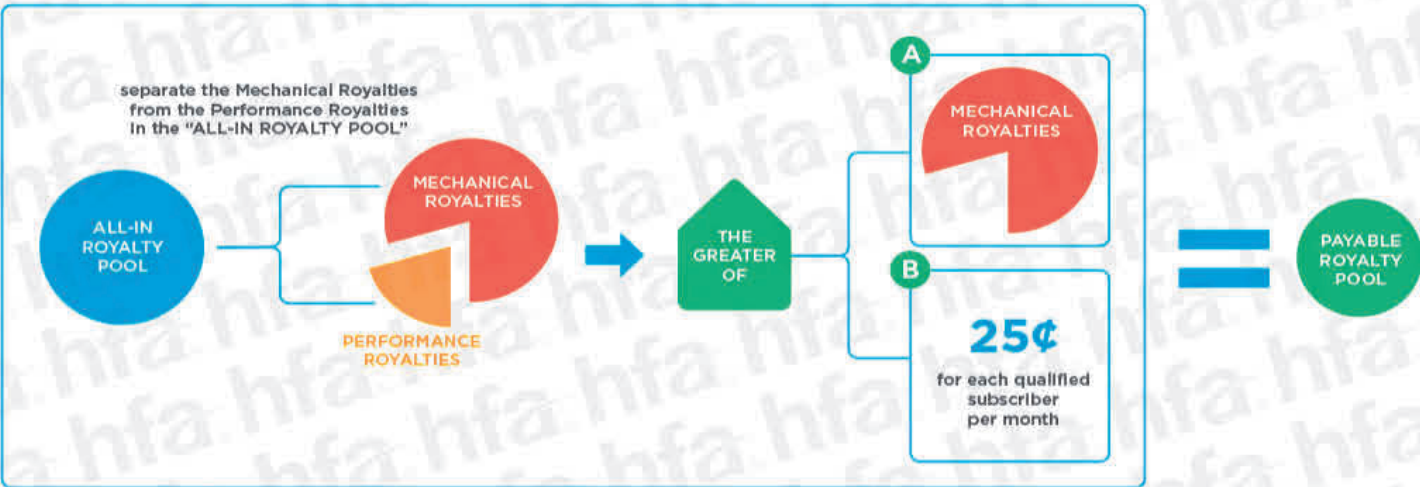
Subscription services sold together with another product (such as a mobile phone)



1 CALCULATE THE ALL-IN ROYALTY POOL



2 CALCULATE THE PAYABLE ROYALTY POOL



3 ALLOCATE PAYABLE ROYALTY POOL

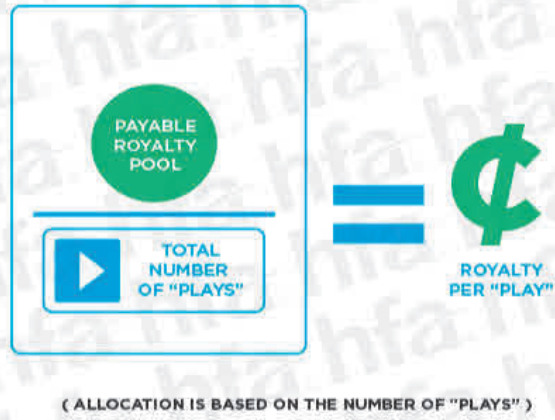


Exhibit 6

Select Apple

RESTRICTED

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
#	RESTRICTED												
1	APL- PHONO4_0000062			RESTRICTED		On-Demand Subscription Streaming	RESTRICTED						
2	APL- PHONO4_0000093			RESTRICTED		On-Demand Subscription Streaming	RE						
3	APL- PHONO4_0000055	APL-PHONO4_00000182				On-Demand Subscription Streaming	RESTRICTED						
4	APL- PHONO4_0000058	APL-PHONO4_00000227				On-Demand Subscription Streaming	RE						
5	APL- PHONO4_0000042	APL-PHONO4_00000128				On-Demand Subscription Streaming	RESTRICTED						
6	APL- PHONO4_0000082	APL-PHONO4_00000123				On-Demand Subscription Streaming	RE						
7	APL- PHONO4_0000049	APL-PHONO4_00000176				On-Demand Subscription Streaming	RESTRICTED						
8	APL- PHONO4_00000711	APL-PHONO4_00001745				On-Demand Subscription Streaming	RE						
9	WITHHELD PENDING MOTION - Agreement	WITHHELD PENDING MOTION - Amendment					RESTRICTED						
10	APL- PHONO4_00001233	APL-PHONO4_00001525				On-Demand Subscription Streaming	RE						
11	APL- PHONO4_00000473	APL-PHONO4_00001158 (2015)				On-Demand Subscription Streaming	RESTRICTED						

Note:

[1] My review of RESTRICTED is not intended to be exhaustive

Exhibit 7
Select Apple License Agreements with Major Record Labels¹

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
#	RESTRICTED											
1		APL-PHONO4_00001266										
		APL-PHONO4_00001562				RESTRICTED	■	■	■	■	■	■
	APL-PHONO4_00000519	APL-PHONO4_00001700	RESTRICTED	RESTRICTED	On-Demand Subscription Streaming							
2		APL-PHONO4_00001321										
		APL-PHONO4_00001526				RES	■	■	■	■	■	■
		APL-PHONO4_00001531										
3	APL-PHONO4_00000626	APL-PHONO4_00001714	RESTRICTED		On-Demand Subscription Streaming							
		APL-PHONO4_00001756	RESTRICTED			RESTRICTED	■	■	■	■	■	■
	APL-PHONO4_00000567	APL-PHONO4_00001680			On-Demand Subscription Streaming							

Note:
[1] My review of Apple's agreements is not intended to be exhaustive

Proof of Delivery

I hereby certify that on Wednesday, October 20, 2021, I provided a true and correct copy of the Apple Vol 2 - Direct Testimony to the following:

Google LLC, represented by Gary R Greenstein, served via ESERVICE at
ggreenstein@wsgr.com

Pandora Media, LLC, represented by Benjamin E. Marks, served via ESERVICE at
benjamin.marks@weil.com

Zisk, Brian, represented by Brian Zisk, served via ESERVICE at brianzisk@gmail.com

Amazon.com Services LLC, represented by Joshua D Branson, served via ESERVICE at
jbranson@kellogghansen.com

Johnson, George, represented by George D Johnson, served via ESERVICE at
george@georgejohnson.com

Joint Record Company Participants, represented by Susan Chertkof, served via ESERVICE
at susan.chertkof@riaa.com

Powell, David, represented by David Powell, served via ESERVICE at
davidpowell008@yahoo.com

Spotify USA Inc., represented by Joseph Wetzel, served via ESERVICE at
joe.wetzel@lw.com

Copyright Owners, represented by Benjamin K Semel, served via ESERVICE at
Bsemel@pryorcashman.com

Signed: /s/ Mary C Mazzello